

## A STUDY OF COGNITIVE DISTORTION AND STRESS AMONG ADULTS

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### **Abstract**

*This study investigates the prevalence of cognitive distortions and stress among adults and explores the relationship between these two variables. Cognitive distortions, which are maladaptive patterns of thinking, can distort perceptions and amplify stress responses. Using a sample of 101 adult participants, the study measured levels of cognitive distortions and perceived stress by using the cognitive distortion scale and perceived stress scale. The results indicated that both cognitive distortions and stress are prevalent among the adult population. However, a correlation analysis revealed no statistically significant relationship between cognitive distortions and stress levels, suggesting that while both issues are common, their interaction may be more complex than initially hypothesized.*

**Keywords:** Cognitions, Cognitive Distortion, Stress, Adults

### **Introduction**

Cognitive distortions are negatively biased thinking patterns that are believed to heighten susceptibility to stress (Dozois & Beck, 2008). Cognitive distortions arise from erroneous thinking patterns during information processing (Beck, 1967). These distortions occur when individuals experience automatic thoughts triggered by events, which then influence their emotions and behaviors. According to the American Association of Psychology (APA) in 2018, a cognitive distortion is defined as faulty or inaccurate thinking or belief. The nature of these automatic thoughts often reflects an individual's core beliefs about themselves, others, and the world. When negative core beliefs are activated, leading to negative automatic thoughts characterized by flawed reasoning, even neutral or positive events can contribute to negative emotions and maladaptive behaviors. Over time, this interaction between thoughts, emotions, and behaviors can lead to more stress. The cycle of cognitive distortion, marked by patterns of illogical thinking and irrational beliefs, plays a significant role in exacerbating behavioral issues such as anxiety, stress, and depression. These distorted thought patterns often lead to conflicts in relationships by warping perceptions, creating misunderstandings, and hindering effective communication.

In recent years, the interaction between cognitive processes and emotional well-being has become a key area of psychological research. Among various cognitive processes, cognitive distortions have been identified as critical factors influencing mental health. Stress is one of the first issues that come to mind when discussing mental health, whether it's positive or negative stress. In various situations and social settings, we encounter stimuli that may or may not induce stress. Cognitive distortions are habitual ways of thinking that are biased,

exaggerated, and often irrational, leading individuals to view reality in a negative light. Common cognitive distortions include overgeneralization, catastrophizing, and all-or-nothing thinking. The concept of cognitive distortions has been widely accepted in both clinical and non-clinical settings and has received substantial empirical support (e.g., Najavitis et al., 2004; Roberts, 2015; Yurica, 2005).

Cognitive distortions were initially identified and detailed by Beck, Rush, Shaw, and Emery (1979). These include personalization (assuming responsibility for negative events), all-or-nothing thinking (seeing situations in extremes without acknowledging the nuances), overgeneralization (believing that a single negative event will lead to a series of negative outcomes), disqualifying the positive (disregarding positive experiences), mental filter (focusing solely on negative aspects while ignoring positives), mind reading (assuming others hold negative opinions about oneself), fortune telling (predicting negative outcomes without considering realistic probabilities), magnification and minimization (exaggerating or downplaying the significance of events), emotional reasoning (trusting emotional responses as evidence of truth), should statements (insisting that things must be a certain way), and catastrophizing (anticipating disastrous outcomes with little or no basis). These cognitive distortions shape negative perceptions and beliefs, which in turn affect emotions and behaviors. Cognitive-behavioral therapists often refer to these patterns as irrational or maladaptive thoughts (Beck & Rector, 1998).

Theoretical and empirical research indicates that when cognitive vulnerability exists, experiencing a negative event can trigger negatively biased information processing, leading to a downward spiral into depressive or anxiety symptoms (Lakdawalla et al., 2007; Weems & Watts, 2005).

One study examined how cognitive distortions related to academic success predict depression, stress, and anxiety in adolescents. Buga & Idris (2022) study found that cognitive distortions were significant predictors of mental health issues such as depression, anxiety, and stress. Dhanlakshmi's (2015) study also showed that general health was positively associated with cognitive distortion and perceived stress but negatively with a sense of coherence.

Perceived stress, defined as the feelings or thoughts an individual has about how much stress they are under at any given time or over a period, is another critical factor affecting mental health. Muran & Motta (1993) explored that clinical patients with anxiety and depression showed more distorted cognitions. The relationship between cognitive distortions and stress is particularly intriguing because cognitive distortions can amplify stress levels by magnifying perceived threats and challenges. This bidirectional relationship suggests that individuals with higher levels of cognitive distortions may experience greater stress, creating a cycle that perpetuates psychological distress. Conversely, stress may reinforce cognitive distortions, further entrenching negative thinking patterns.

Despite the importance of cognition and the distortions that occur within it particularly their relationship to stress, there is a notable lack of research exploring the connection between cognitive distortions and stress in adults. Thus, this study aimed to assess the prevalence of cognitive distortions and stress levels among adults and to explore the relationship between cognitive distortions and stress in this population.

### Objectives

1. To examine the prevalence of cognitive distortions among adults.
2. To examine the stress level among adults.
3. To examine the correlation between cognitive distortion and stress in adults.

### Methodology

#### Sample

A total number of 101 participants aged between 20 and 60 years were included in the study through purposive sampling from Delhi, NCR. An informed consent was obtained and forms were distributed via a Google form to the participants.

#### Tools Used

1. *Cognitive Distortion Scale (CDS)*- Devendra Singh and Dharmendra Sharma developed the cognitive distortion scale of 25 statements by using a Likert scale. The reliability of the test was determined by (a) test-retest method and b) internal consistency method. The scores on each were 0.65

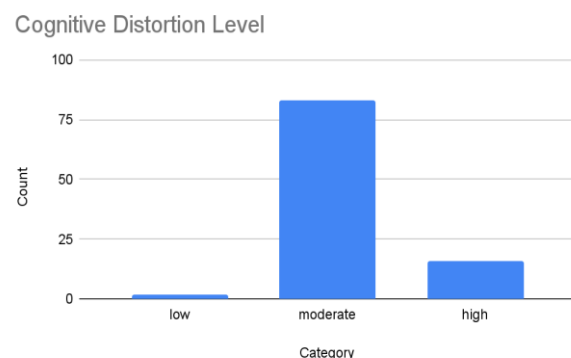
and 0.79 respectively. The scale has high content validity. The scale was validated against the external criteria and the coefficient obtained was 0.71.

2. *Perceived Stress Scale (PSS)*- It is an assessment scale designed by Sheldon, Ronald, and Lynn in 1983, containing 14 items that explore the thoughts and feelings of the participant in the last one month. The tool is designed on the Likert scale consisting of 5 alternatives where never= 0, almost never= 1, sometimes= 2, fairly often =3, and very often= 4. There are a total of six items ( 4, 5, 6, 7, 9,10, 13) that have positive feelings which means they are in reverse form and hence the scores will be reversed. Reliability of the test is obtained by a) Chronbach's alpha internal coefficient of internal reliability=0.75

### Result and Discussion

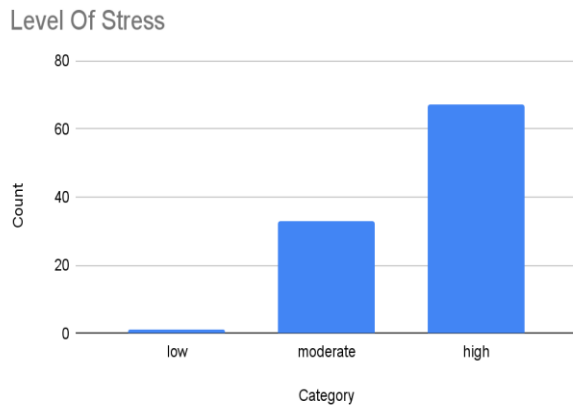
In this study, descriptive analysis of mean, standard deviation, and Pearson product-moment correlation was taken by IBM SPSS Version 25. The participant demographics revealed a slight skew towards females, constituting over 60% of the total, with males comprising 39.6%. Regarding age distribution, the highest proportion (10%) fell within the 30-year-old range, followed closely by 8.9% in the 24-year-old bracket, indicating diversity across age groups. Additionally, the sample included 43% students and 56% individuals from the working class or those with past work experience.

**Graph 1- The Level of Cognitive Distortions among Adults**



The graph 1 indicates that out of 101 participants, 83 individuals which is approximately 82% fall in the range of moderate cognitive distortions which is the standardized range of 61-90 according to the manual, while 15% of respondents have a high cognitive distortion which is the range of 91-125. The findings indicate that a considerable number of adult population experiences moderate to high levels of cognitive distortions which is potentially affecting their general mental health and daily functioning.

**Graph 2: The Level of Stress among Adults**



From Graph 2, it is evident that the level of perceived stress among participants where 66% of individuals, that is 67 participants show a high stress level which is on a scale of 27-40. Apart from this, there are 33% of participants with a moderate stress level. The escalating levels of stress are a significant concern, as evidenced by numerous studies documenting its rise. Among youth, stress is fueled by academic pressure, financial constraints, health issues, and uncertainty about the future. Similarly, individuals in early adulthood face stressors such as job demands and the struggle to maintain a work-life balance.

**Table 1: Mean and Standard Deviation of Cognitive Distortions and Stress among adults (n=101)**

Variables	Mean	Std. Deviation
Cognitive Distortion	80.73	10.61
Stress	28.26	4.56

The findings in Table 1, with a mean score of 80.73 for cognitive distortions and 28.26 for stress, and standard deviations of 10.61 and 4.56 respectively, suggest a substantial prevalence of both cognitive distortions and stress among adults. This notable prevalence may be attributed to cognitive patterns and the common stressors encountered in daily life. One possible explanation is that cognitive distortions are inherently linked to individuals' automatic thoughts and beliefs, which can amplify stress responses. Cognitive distortions such as catastrophizing, overgeneralization, and all-or-nothing thinking tend to magnify perceived threats or challenges, leading to heightened stress levels. Beck (1979) identified these distortions as habitual and maladaptive patterns of thinking, which, when pervasive, can predispose individuals to stress-related conditions like anxiety and depression.

Supporting studies indicate that individuals with high levels of cognitive distortions are more likely to experience elevated stress (Hollon & Kendall, 1980). These distorted cognitive processes contribute to stress by distorting reality and leading to negative interpretations of events.

Additionally, stress itself can reinforce cognitive distortions, creating a feedback loop where stress and distorted thinking reinforce each other. Research by Ingram and Holle (1992) supports this view, demonstrating that individuals under chronic stress are more likely to rely on maladaptive cognitive schemas, which in turn exacerbate their stress. This cyclical relationship suggests that high levels of cognitive distortions are both a cause and consequence of stress.

The findings may also reflect the role of cognitive distortions in shaping emotional responses to everyday life challenges. Cognitive-behavioral models suggest that these distorted thinking patterns influence how individuals interpret stressful situations, often leading to exaggerated emotional responses (Beck et al., 1979). For example, emotional reasoning—believing something is true solely based on feelings rather than evidence—can lead individuals to experience stress more intensely. This aligns with research by Clark & Beck (1999), which found that cognitive distortions are significant predictors of emotional distress, including stress.

In conclusion, the high levels of cognitive distortions and stress observed in the study can be understood as interrelated phenomena, supported by cognitive-behavioral theories and empirical studies. The persistence of these cognitive distortions may drive the elevated stress levels, underscoring the need for interventions aimed at modifying distorted thinking to reduce stress and improve mental health.

**Table 2: Correlation between Cognitive Distortion and Stress among Adults**

Variables	Stress
Cognitive Distortion	.020

The findings in Table 2, where the correlation coefficient ( $r = 0.020$ ) is not statistically significant at the 0.05 level, suggest that no meaningful relationship exists between cognitive distortions and stress levels in this sample. This lack of correlation may seem counterintuitive, given the existing literature that often links cognitive distortions to heightened stress and mental health challenges. The result of the study contradicts the previous study (Bugha & Idris 2022), which shows a positive relationship between cognitive distortions

and increased stress levels. Another study (Dhanalakshmi, 2015) suggests a nuanced relationship influenced by factors like the sense of coherence and general health.

However, several factors could explain this result. First, it is possible that other variables, such as coping mechanisms, social support, or individual resilience, might mediate the relationship between cognitive distortions and stress, diluting the direct correlation between the two. For instance, studies have shown that individuals with strong social support systems may experience fewer negative effects from cognitive distortions, thus reducing their stress levels (Cohen & Wills, 1985). Additionally, personal resilience and adaptive coping strategies have been found to mitigate the impact of cognitive distortions on stress (Southwick et al., 2014).

Another possible explanation is the diversity of the sample. Different subgroups within the population may exhibit varying levels of cognitive distortions and stress based on factors like socioeconomic status, education, or cultural background. Research by Hobfoll (2001) indicates that stress responses and cognitive processes are influenced by resource availability and cultural norms, which could explain why a broad sample might not show a direct relationship.

Moreover, stress is a multifaceted construct influenced by a variety of environmental, psychological, and physiological factors beyond cognitive distortions alone. Studies have found that stress levels can be significantly affected by external stressors like job pressure, financial concerns, or health issues, which may operate independently of cognitive distortions (Lazarus & Folkman, 1984). This could dilute the correlation between the two variables in a general population.

In conclusion, while cognitive distortions are widely recognized as contributors to mental health challenges, this study's findings suggest that their relationship to stress is not straightforward and may be moderated by other factors. Future research should consider these additional variables to gain a more nuanced understanding of how cognitive distortions and stress interact in different contexts.

The current study has limitations that suggest avenues for further research. Increasing the sample size could improve result generalizability. Using diverse sampling techniques, such as random or stratified sampling rather than purposive sampling, may yield a more representative sample and enhance validity. Future studies should explore gender disparities in stress perception and the impacts of tailored interventions. Analyzing urban-rural differences could also elucidate environmental influences on stress and coping mechanisms.

Despite moderate cognitive distortions and high-stress levels co-occurring, no significant correlation was found, indicating that their relationship is not strong enough to establish a significant association in this sample.

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