

## EFFECT OF ACCEPTANCE AND COMMITTEMENT THERAPY IN REDUCING STRESS AMONG POSTGRADUTE STUDENTS OF USMANU DANFODIYO UNIVERSITY, SOKOTO, NIGERIA

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### Abstract

*This study investigated the effect of Acceptance and Commitment Therapy (ACT) in reducing stress among postgraduate students at Usmanu Danfodiyo University, Sokoto. The research was guided by three objectives and three corresponding hypotheses. The study used a pre-test, post-test quasi-experimental research design. The population consisted of eight (8) postgraduate students in one program within the Department of Educational Foundations, all of whom were included in the sample. Data was collected using an adapted Academic and Psychological Stress Scale. This 40-item instrument was divided into two sections: items 1-20 measured academic stress, and items 21-40 measured psychological stress. The scale used a 4-point rating. The reliability coefficients were .86 (test) and .84 (retest) for the academic stress subscale, and .72 (test) and .79 (retest) for the psychological stress subscale. Data was collected during both pre-test and post-test phases. The findings showed a significant effect of ACT in reducing academic stress ( $p=.001$ ). A significant difference was also found between academic and psychological stress among the students, with mean scores of 48.32 for academic stress and 26.98 for psychological stress ( $p=.001$ ). Based on these findings, it was concluded that ACT has a significant effect on reducing stress and that there is a significant difference between academic and psychological stress. The study recommends that educational, counseling, and clinical psychologists use ACT to help reduce academic and psychological stress among both postgraduate and undergraduate students.*

**Keywords:** academic stress, psychological stress, acceptance and commitment therapy, postgraduate students

**DOI:** <https://doie.org/10.10318/SER.2025482170>

### Introduction

Stress was first introduced in the life sciences by Hans Selye in 1936, deriving from the Latin word "Stringere," which means "to be drawn tight." As Nirmala and Raju (2021) noted, the modern problem of stress stems from the environment humans have created. Despite its scientific and materialistic advancements, the 20th century has been called "an age of stress." Stress is a universal human experience that affects individuals of all ages, especially students. Adolescents and students, in particular, face numerous pressures from school, family, and peers, leading to significant stress from both pleasant and unpleasant experiences.

Traditionally, stress has been categorized by its sources: internal or external (Marion, 2023). Internal sources include hunger, pain, noise sensitivity, temperature changes, crowding, fatigue, and over- or under-stimulation. External stressors encompass separation from family, changes in family structure, exposure to conflict, violence, bullying, loss of personal property or pets, excessive expectations, hurrying, and a disorganized daily life (Bullock, 2022). Stress has become a significant concern in modern academic environments. Wilbert (2022) described it as "the non-specific response of the body to any demand for change."

Stress involves physiological and psychological responses to conditions that challenge or threaten a person, requiring adaptation or adjustment (Opara, 2022). Holmes and Rahard (2019) define stress as a state that demands both physical and mental energy, implying that both positive and negative events can cause it. Smith, Segal, and Segal (2023) describe stress as a normal physical response to events that threaten or upset one's balance. It's a natural part of life, resulting from a combination of internal and external forces that affect physical and emotional equilibrium. The concept of stress highlights the mental and physical changes that occur as a person adjusts to their environment. It is the "wear and tear" the body experiences while adapting to a continuously changing environment, causing feelings of unease or unpleasant states due to unmet needs and desires compared to environmental demands and resources. According to Akinde (2022), stress is any environmental demand that creates tension or threat, requiring change or adaptation, often resulting in high levels of mental arousal and body tension that exceed a person's capacity to cope. Stress can also be defined as "a state of mental or emotional strain or suspense," which includes normal reactions designed for self-preservation (Wordnet, 2023).

Stress involves various stressors that can impair judgment, reduce concentration, and decrease self-esteem, leading to increased anxiety and depression (Nguyen, 2020). It is also linked to a range of negative health outcomes, including depression, anxiety, and physical illnesses (Kim, Park, & Lee, 2019). The overwhelming burden of information often leaves minimal opportunity for relaxation, sometimes causing serious sleep deprivation (Foster & Smith, 2020). Stressful situations can cause the brain to reduce its capacity by inhibiting neuron growth. Under such stress, individuals may show signs of distress, anxiety, fatigue, fear, and frustration. Falling short of personal or others' expectations can threaten one's life prospects, leading to disapproval, rejection, humiliation, guilt, and a blow to self-esteem.

Smith, Segal, and Segal (2023) grouped stress symptoms into four categories:

Cognitive symptoms include memory loss, an inability to concentrate, poor judgment, and anxious thoughts.

Physical symptoms encompass aches and pains, diarrhea, constipation, nausea, dizziness, chest pain, a rapid heartbeat, a loss of sex drive, and frequent colds.

Emotional symptoms include moodiness, irritability, agitation, loneliness, and depression.

Behavioral symptoms involve eating more or less, sleeping too much or too little, procrastination, neglecting responsibilities, drug or alcohol abuse, and nervous habits like nail-biting.

Morocola and Okanlawo (2021) identified other signs and symptoms of stress, such as loss of appetite, lack of energy, frequent urination, forgetfulness, difficulty concentrating, nervousness, and increased use of psychoactive substances. Akinboye, cited in Liman (2021), provided additional signs, including general irritability, hyper-excitation, emotional instability, and physical symptoms like headaches, excessive sweating, and a frequent need to urinate. Machina (2022) identified cognitive symptoms such as memory problems, indecisiveness, poor judgment, racing thoughts, and constant worrying. Stress is also associated with physiological symptoms characteristic of sympathetic nervous system activity, such as increased heart rate, elevated blood pressure, sweating, and a raised blood coagulation rate (Krishnan, 2023).

Stressors are demands that can trigger a stress reaction. Coon, cited in Ogunye (2022), defines a stressor as a condition or event that challenges or threatens an individual. Stressors range from mild to severe and can be physical, financial, academic, or psychological. The experience of stress can differ from one individual to another because of the varied conditions they face. An individual experiences an event as stressful if they see it as a threat and feel unable to cope with it effectively. Physical stressors, such as exercise, restraint, heat, cold, noise, pain, injury, and infection, can all produce stress responses proportional to the intensity of the stimulus. Stress causes various physical symptoms associated with sympathetic arousal, leading to changes in concentration and behavior. It can also cause feelings of apprehension, dread, uneasiness, and vulnerability.

Acceptance and Commitment Therapy (ACT) is a new generation of behavioral therapies that combines well-known techniques from cognitive behavioral therapy (CBT) with strategies that promote acceptance—making space for allowing painful psychological events (Eilenberg, 2015). She maintains that ACT is a combination of acceptance and mindfulness-based processes with behavioral strategies to increase an individual's psychological flexibility. This flexibility is the ability to recognize and adapt to various situational demands in the present moment, without needless defense, in the service of chosen values, even when difficult thoughts, feelings, or sensations are present.

ACT emphasizes the function of inner experiences—that is, how thoughts are experienced and regulated—rather than testing the validity, form, intensity, or frequency of such experiences (Eilenberg, 2015). The ultimate goal of ACT is to increase psychological flexibility and, therefore, strengthen the ability to act in accordance with personal values, even in the presence of distress.

Acceptance is the practice of being open to all aspects of your experience, including unwanted or painful thoughts, feelings, and bodily sensations (Gillard & Flaxman, 2017). While most people do not want to have painful experiences, a willingness to have them at times is an essential part of what is required to live the life one truly wants to live. Acceptance is about making room for unpleasant feelings, sensations, urges, and other private experiences, allowing them to come and go without struggling with them, running from them, or giving them undue attention (Harris, 2006). For example, clients learn to accept that they are having a thought such as "I am worthless."

The theoretical foundation of ACT is a form of Mindfulness-based Cognitive Behavioral Therapy (Groot et al., 2014) underpinned by a contemporary functional

account of human language processes known as Relational Frame Theory (RFT). From an RFT perspective, language and cognition result from continually learning and deriving relationships between different stimuli and events in a particular way. Unlike many therapies, ACT is not based on the concept of Healthy Normality, which believes that humans are, by nature, psychologically healthy and that a healthy environment, lifestyle, and social context will naturally lead to happiness and contentment. From this perspective, psychological suffering is seen as abnormal or a disorder.

However, ACT is based on two different assumptions: Destructive Normality and Experiential Avoidance (Levin et al., 2013). **Destructive Normality.** This assumption suggests that the psychological processes of a normal human mind are often destructive and will create psychological suffering for us all, sooner or later. Harris (2006) explained that ACT postulates that the root of this suffering is human language itself, as it is a highly complex system of symbols, including words, images, sounds, facial expressions, and physical gestures. We can use this language in both public and private domains. The public use of language includes speaking, miming, gesturing, writing, painting, and singing. The private use of language, also called cognition, includes thinking, imagining, daydreaming, planning, and visualizing. These processes make the mind a complex set of cognitive functions, such as analyzing, comparing, evaluating, planning, and remembering, all of which rely on human language. Therefore, in ACT, the word "mind" is used as a metaphor for human language itself. However, human language can be either positive or negative.

**Experiential Avoidance.** ACT rests on the assumption that human language naturally creates psychological suffering. Harris (2006) explained experiential avoidance as a struggle with our own thoughts and feelings. The single biggest evolutionary advantage of human language was probably the ability to anticipate and solve problems by figuring out how to get rid of them or avoid them. Nonetheless, this approach works well in the material world but not with private experiences, such as thoughts, feelings, memories, sensations, and urges. Unfortunately, when people try to avoid or get rid of unwanted private experiences, they often create extra suffering for themselves. For example, virtually every addiction begins as an attempt to avoid or get rid of unwanted thoughts and feelings, such as boredom, loneliness, anxiety, depression, and stress.

According to Hayes et al. (2002), psychological flexibility is technically defined as contacting the present moment as a conscious human being and, based on what the situation affords, acting in accordance with one's chosen values. Psychological flexibility is at the center of the ACT model and is the defining concept of mental well-being and behavioral functioning. It is a model that serves as the unifying conceptual system for ACT at an applied level (Levin et al., 2013). Psychological flexibility determines what kind of person an individual will be and predicts whether a person will develop a mental health problem like depression, anxiety, or trauma. It is relevant in all areas of human experience and can be changed, leading to a positive shift in negative life trajectories (Hayes, 2016). Psychological flexibility is based on six core processes: cognitive defusion, acceptance, contact with the present moment, self as context, values, and committed actions.

Postgraduate students show symptoms of stress that consist of emotional disturbances such as fear, frustration, anger, sadness, and grief. Psychological stress is often caused

by relationship issues with family and friends, lecturers, the learning environment, and learning difficulties.

### **Statement of the Problem**

Postgraduate students face academic and psychological stress due to the demands of their studies, research, and other academic responsibilities. This academic and psychological stress has negative implications for their mental health, academic performance, and academic achievement. The researchers observed a need to reduce the level of academic and psychological stress among postgraduate students to minimize program delays and improve their academic performance and achievement. The researchers used Acceptance and Commitment Therapy, with a focus on training postgraduate students to accept undesirable and unwanted conditions associated with stressful events, since we are aware that stress is an integral part of all healthy human interactions. Stress significantly contributes to the development and progression of psychopathology in children and adolescents. Based on this, the researcher needs to justify that academic and psychological stress among postgraduate students can be managed within an acceptable and accommodating level for better mental health functioning, higher academic performance, and improved achievement.

### **Objectives of the study**

The following objectives of this study were to examine:

- i. The effect of acceptance and commitment therapy in reducing academic stress among postgraduate students of Usman Danfodiyo University, Sokoto
- ii. The effect of acceptance and commitment therapy in reducing psychological stress among postgraduate students of Usman Danfodiyo University, Sokoto
- iii. The differential effect of acceptance and commitment therapy between academic and psychological stress among postgraduate students of Usman Danfodiyo University, Sokoto.

### **Research Hypotheses**

The following null hypotheses were formulated and tested at 0.05 alpha level of significance:

- i. There is no significant difference between pre-test and post-test mean scores of academic stress among postgraduate students exposed to acceptance and commitment therapy of Usman Danfodiyo University, Sokoto
- ii. There is no significant difference between pre-test and post-test mean scores of psychological stress among postgraduate students exposed to acceptance and commitment therapy of Usman Danfodiyo University, Sokoto
- iii. There is no significant differential effect of acceptance and commitment therapy between academic and psychological stress among postgraduate students of Usman Danfodiyo University, Sokoto.

## **Methodology**

This research used a pre-test post-test quasi-experimental design to determine if Acceptance and Commitment Therapy (ACT) is effective in reducing stress among postgraduate students at Usmanu Danfodiyo University, Sokoto. This design was chosen to compare the pre-test and post-test mean scores of participants, establishing whether ACT could reduce stress. According to Nwankwo (2016), a quasi-experimental design is suitable for studies that don't require the manipulation of variables. Through randomization, subjects were assigned to one treatment and one control group. Both groups underwent pre-testing and post-testing. The study's population consisted of all postgraduate students in a selected M. Ed program within the Department of Educational Foundations, totaling eight students. All eight students were included as the study's sample. A sample size of eight is appropriate for quasi-experimental research, as De-winter (2013) suggests that sample size depends on the nature, risk, cost, and prevalence of the research conditions. They also noted that a sample of three to forty participants can be used in experimental studies, with better results often obtained in smaller groups. Two adapted instruments, developed by Balarabe (2007), were used to measure academic and psychological stress. Each instrument had twenty items with a four-point scale: Very True (VT), True (T), Untrue (UT), and Very Untrue (VUT), which measured the participants' stress levels. To establish content validity, copies of the instruments were given to professionals in educational psychology (mental health) to confirm their suitability for data collection. The academic stress instrument had an internal consistency of .86 and a re-test reliability of .84. The psychological stress instrument had an internal consistency of .72 and a re-test reliability of .79. Both instruments were deemed effective for this study.

Data were collected during the pre-test, treatment sessions, and post-test. The data were then analyzed using both descriptive and inferential statistics. A paired sample t-test was used to test hypotheses 1 and 2, while an independent t-test was used for hypothesis 3. All statistical tests were conducted at a 0.05 alpha level of significance.

## **Results**

Hypothesis 1: There is no significant difference between pre-test and post-test mean scores of academic stress among postgraduate students exposed to acceptance and commitment therapy of Usman Danfodiyo University, Sokoto

**Table 1: Paired Sample t-test of Pre and Post-Tests of Acceptance and Commitment Therapy in reducing academic stress**

| <b>Groups</b> | <b>N</b> | <b>Mean</b> | <b>SD</b> | <b>t</b> | <b>df</b> | <b>p</b> |
|---------------|----------|-------------|-----------|----------|-----------|----------|
| Pretest       | 8        | 48.32       | 4.96      | 10.83    | 7         | .001     |
| Posttest      | 8        | 26.98       | 2.69      |          |           |          |

Table 1 shows significant effect of acceptance and commitment therapy in reducing academic stress among postgraduate students of Usmanu Danfodiyo University, Sokoto as vindicated by mean of 48.32 for pre-test and the mean of 26.98 for post-test;  $t = 10.83$  and  $p = .001$  which is lower than 0.05 alpha level of significance. Thus, the null hypothesis which states that There is no significant difference pre-test and post-test mean scores of academic stress among postgraduate students exposed to acceptance and commitment therapy of Usman Danfodiyo University, Sokoto is hereby rejected.

Hypothesis 2: There is no significant difference between pre-test and post-test mean scores of psychological stress among postgraduate students exposed to acceptance and commitment therapy of Usman Danfodiyo University, Sokoto

**Table 2: Paired Sample t-test of Pre and Post-Tests of Acceptance and Commitment Therapy in Reducing Psychological Stress**

| Groups   | N | Mean  | SD   | t    | df | p    |
|----------|---|-------|------|------|----|------|
| Pretest  | 8 | 46.79 | 5.89 | 4.12 | 7  | .002 |
| Posttest | 8 | 33.90 | 6.51 |      |    |      |

Table 2 indicated significant effect of acceptance and commitment therapy in reducing psychological stress among postgraduate students of Usman Danfodiyo University, Sokoto as vindicated by the mean of 46.79 for pre-test and the mean of 33.90 for post-test;  $t = 4.12$  and  $p = .002$  which is lower than 0.05 alpha level of significance. Thus, the null hypothesis which states that, there is no significant difference between pre-test and post-test mean scores of psychological stress among postgraduate students exposed to acceptance and commitment therapy of Usman Danfodiyo University, Sokoto is hereby rejected.

Hypothesis 3: There is no significant differential effect of acceptance and commitment therapy between academic and psychological stress among postgraduate students of Usman Danfodiyo University, Sokoto.

**Table 2: Independent t-test of Analysis Comparing Mean Scores of Academic and Psychological Stress Level**

| Groups               | N | Mean  | SD   | t    | df | p    |
|----------------------|---|-------|------|------|----|------|
| Academic Stress      | 8 | 42.80 | 4.39 | 3.89 | 9  | .004 |
| Psychological Stress | 8 | 26.98 |      |      |    |      |

Table 3 shows that there is significant difference between academic and psychological stress among postgraduate students of Usman Danfodiyo University, Sokoto with mean scores of 42.80 for academic stress and 26.98 for psychological stress,  $p = .004$ . This revealed that postgraduate students experienced higher academic stress than psychological stress. Therefore, the null hypothesis which states that, there is no significant differential effect of acceptance and commitment therapy between academic and psychological stress among postgraduate students of Usman Danfodiyo University, Sokoto is hereby rejected.

## Discussion of Findings

This study examined the effect of acceptance and commitment therapy (ACT) in reducing academic and psychological stress among postgraduate students at Usman Danfodiyo University, Sokoto. The results from hypotheses one and two revealed that ACT had a significant effect in reducing both academic and psychological stress among these students.

This finding aligns with the work of Rabi (2024), who investigated the impact of a social support technique on managing separation anxiety in student-victims of armed banditry. Rabi's findings showed that the social support technique was significantly effective in managing the physical and behavioral symptoms of separation anxiety. The

results also agree with the study by Simon et al. (2020), which examined the efficacy of cognitive restructuring and cognitive defusion (a component of ACT) in reducing children's fear of the dark. In their study, highly anxious children, aged 8–12 years, were randomly assigned to a 30-minute cognitive restructuring or cognitive defusion intervention. Both interventions had a significantly positive impact on the children's fear. While cognitive restructuring led to more favorable results on subjective fear, no significant differences were found between the two interventions regarding darkness tolerance.

The finding for hypothesis three, which posited a significant difference between academic and psychological stress among postgraduate students, was also confirmed. The results revealed that students experienced significantly higher academic stress compared to psychological stress. This finding is consistent with the research by Muhammad (2024), who examined the effect of systematic desensitization and study skills training on examination anxiety among secondary school students. Muhammad's study revealed that both systematic desensitization and study skills training had a significant effect on reducing examination anxiety.

## **Conclusion**

Based on the findings of this study, it can be concluded that acceptance and commitment therapy was significantly effective in reducing both academic and psychological stress. Additionally, the study found a significant difference in the types of stress experienced, with postgraduate students experiencing higher levels of academic stress than psychological stress.

## **Recommendations**

1. Educational Psychologists, counselling psychologists and clinical professional are encouraged to use acceptance and commitment therapy in reducing academic and psychological stress among postgraduate students as well as undergraduate students.
2. Postgraduate students should be trained with different coping strategies on how to reduce both academic and psychological stress level for better academic engagement and academic performance as well as functional mental health system.
3. Educational psychologists should train the postgraduate students on how to minimize academic stress for proper learning.

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