Impact of Acceptance and Commitment Therapy on Psychological Flexibility Among University Students with High-Stress Levels in Bengaluru

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Abstracts

This study looks at how psychological adaptation and mental health outcomes, like stress, anxiety, and depression, are affected by Acceptance and Commitment Therapy (ACT) in high-stress university students in Bengaluru. The study aims to explore the relationship between psychological flexibility and mental health, with a particular focus on whether ACT can improve psychological flexibility and reduce stress-related symptoms in students. As part of the study's quasi-experimental design, 200 college students took part in pre- and post-test assessments. The demographic survey, Psychological Flexibility Questionnaire (PFQ-2), and the Perceived Stress Scale (PSS) measuring stress levels were employed as the methods that assessed the participants. The outcomes indicated that ACT drastically improved the psychology of flexibility in students that reduced their stress, anxiety, and even depression. Yet another dimension that the study has covered is the level to which these demographic factors -- gender, academic track, and social standing -- influence the success of ACT in terms of psychological flexibility and stress management. Thus, this study adds to the ever-growing body of evidence regarding how this therapeutic model of ACT improves mental health outcomes for students in demanding academic settings. It would thus have practical implications for mental health practitioners and educational institutions that want to foster psychological well-being by providing insight into how psychological therapies might be tailored to meet the requirements of diverse student populations.

Keywords: Acceptance and Commitment Therapy, Psychological Flexibility, University Students, High-Stress Levels, Bengaluru.

1. INTRODUCTION

Among the factors of general wellbeing identified as serious problems for many undergraduate students is the psychological well-being (Higgins, 2023). At times, in all activities that a student is engaged in from academics, social life, to all else that may be important for a student, the pervasiveness of such psychological problems like stress, anxiety, and depression severely constrain this performance. Most students in this competitive and diversified city like Bengaluru relate to these issues, which are often unknown in their minds and often visited without necessary tools for effective management (Deshpande et al. , 2020). One approach that has received much attention for its potency in dealing with those problems is Acceptance and Commitment Therapy ACT, which is a type of cognitive-behavioural therapy highly focusing on cultivating psychological flexibility (Devi, & Srivastava, 2023). Method is increasingly viewed as an potential intervention to enhance psychological well-being outcomes particularly in populations like college students who are

experiencing higher psychological stress (Feinstein, 2023).

The foundation of ACT is the idea that suffering is a natural part of life and that people should learn to embrace their unpleasant feelings rather than run away from or struggle with them (Ekawarna, et al., 2021). It inspires people to become more conscious of their thoughts and feelings and to make a commitment to acting in a way that is consistent with their basic beliefs, even when they are in pain. (Eljo, & Nadaf, 2020) Regardless of challenging feelings or thoughts, it can be characterised as the core idea of ACT that denotes present-moment awareness, openness to experience, and participation in meaningful action (Gandhi, 2022). The symptoms of stress, anxiety, and depression will be much lessened by the ability to psychologically adapt to changing situations, tolerate discomfort, and make decisions that are steadfast in the face of emotional anguish (Garcia, 2021).

It has been demonstrated that psychological flexibility improves mental health by enabling a more flexible reaction to stimuli (Hessari, 2023). Improving the psychological adaptability of undergraduate students—who typically experience high levels of social and academic pressure—may provide them with the most effective coping mechanisms. Stress, anxiety, and melancholy are frequently brought on by or made worse by negative thought patterns, self-criticism, and a tendency to avoid unpleasant emotions (Glyn-Jones, 2023). By training the student to acknowledge and address his inner challenges, ACT helps break the pattern, lessening the psychological load and enhancing the student's general emotional health.

Particularly relevant in Bengaluru is the significance of ACT in comprehending how psychological flexibility affects stress, anxiety, and depression (Prasad, et al., 2020). Students in Bengaluru experience higher levels of stress due to the fast-paced academic environment and social expectations (Row Kavi, et al. , 2022). According to studies, students in urban areas are more likely to experience psychological distress, and stigma, limited access to mental health services, and a lack of knowledge about the availability of psychological interventions are further obstacles to getting help (Sahithya, 2020). Since students not only learn how to manage any short-term distress but also develop a lifetime set of skills for resilience and emotional well-being, incorporating ACT into student wellness programs may in fact be a transformative approach towards better mental health outcomes (Tshababa, 2023). The present study examines how well Acceptance and Commitment Therapy fosters psychological flexibility and how this in turn affects undergraduate students' stress, anxiety, and depression in Bengaluru (Saluja, 2023).

Cherry, J., & Miller, M. E. (2024) determined whether psychological flexibility is a significant predictor of reduced stress levels among DPT students and, if so, on what dimension. No college student is immune to the negative effects of stress on their health and academic performance both during and after their time at university. Stress management strategies on college campuses might help students. The identification of changeable psychological traits that aid students in dealing with stress is of the utmost importance. One of these factors could be psychological adaptability. It is unclear whether DPT students will experience the anticipated correlation between psychological flexibility and stress. A total of sixty-six DPT students from four different universities took part in the research. A demographic survey, the 10-item Perceived Stress Scale, and the Comprehensive

Assessment of Acceptance and Commitment Therapy procedures were electronically administered to the participants. Stress levels were lower in those whose psychological flexibility was higher. Reduced reported stress was most strongly predicted by the psychological flexibility component openness to experience. Psychological flexibility therapies, especially an openness to experience, may alleviate stress for DPT students, according to the results (Cherry, 2024).

Yang, et al. (2024) explored how the online ACT intervention might affect the improvement of Chinese university students' well-being. In this pilot study, a possible advantage of dealing with the students' mental health issues by applying ACT is being highlighted. The latter is a type of psychological intervention which integrates elements of behavioral change techniques along with mindfulness. Given the surging trends of stress, anxiety, and depression among students, the authors underscore the importance of mental health within the learning environment. The study demonstrated how ACT helped the students become more psychologically flexible to enable them to control thoughts and feelings. The study further revealed crucial insights on digital mental health interventions and possible ways they could be amended to fit university populations, especially within diverse cultural contexts, through investigating the effects of the online format. The results revealed that the online ACT interventions offered an effective tool for the practical enhancement of students' emotional resilience and general wellbeing (Yang, 2024).

Kalburge (2023) investigated how working from home can be a transformative strategy for persons with severe mental illness. This dissertation presents both qualitative and quantitative evidence that artistic endeavors can foster hope, improve occupational involvement, and empower individuals. This raises important issues, such as routine, training, and the psychological advantages of working to lessen stigma and promote mental health rehabilitation. In addition, Kalburge highlights the infrastructure that would make it easier for those suffering from the most severe types of mental illness to access home-based employment opportunities. Kalburge concludes that, in general, home-based programs would have a hugely beneficial effect on their well-being (Kalburge, 2023).

Wersebe, et al. (2018) analyzed the relationship between an increase in overall PF during an intervention and subsequent enhancements in well-being and decreases in stress. Individuals frequently pursue mental health services when chronic stress depletes their coping strategies. Psychological flexibility (PF) is thought to reduce suffering and improve well-being; Acceptance and Commitment Therapy (ACT) is an intervention designed to develop PF. A randomized controlled study was performed on an ACT-based self-help intervention. Ninety-one participants reported experiencing significant work-related strain. Measurements were acquired before, during, and after the three-month follow-up. The findings from the structural equation models indicate a positive link between the overall enhancement in PF during the intervention and an improvement in well-being, alongside a negative correlation with a reduction in stress. Nonetheless, no association was observed between the intervention and a reduction in well-being or stress. Our research offers concrete evidence that ACT can mitigate stress and enhance well-being, while also indicating the potential of PF in this context (Wersebe, 2018). On the basis of the review of literature certain objectives were formulated.

Objectives of the Study

- To evaluate the psychological adaptability of Bengaluru university students who experience high levels of stress.
- To assess how university students' psychological flexibility is enhanced by Acceptance and Commitment Therapy (ACT).
- To look into how psychological adaptability, acceptance, and mindfulness effect college students' levels of stress, anxiety, and depression.

Hypotheses

H_1: Psychological flexibility (H_1a), acceptance (H_1b), and mindfulness (H_1c) will have a major impact on undergraduate students' stress levels.

H_2: Psychological flexibility (H_2a), acceptance (H_2b), and mindfulness (H_2c) will have a substantial impact on undergraduate students' anxiety levels.

H_3: Psychological flexibility (H_3a), acceptance (H_3b), and mindfulness (H_3c) will have a substantial impact on undergraduate students' depression levels.

H_4: The association between psychological flexibility and stress is significantly moderated by gender (H_4a), stream (H_4b), social status (H_4c), and area of residence (H_4d)

METHODOLOGY

Research Design

The influence of Acceptance and Commitment Therapy (ACT) on psychological flexibility among high-stress university students in Bengaluru is evaluated using a quantitative, quasi-experimental design. Changes in psychological flexibility before and after the intervention are assessed using a pre-test and post-test approach.

- **Pre-test:** Information on students' stress levels and psychological adaptability is gathered prior to the intervention.
- **Post-test:** The same measurements are taken to ascertain whether there have been any changes following the intervention (ACT).

Population and Sampling

The population of the study comprised of 100 male and female students between 18–25-years from Bengaluru university. Students who self-report high levels of stress and were willing to participate in the study were chosen using a convenience sampling technique. There were 100 students in the sample, 50 in each of the two groups—the experimental group (ACT intervention) and the control group (non-intervention). Students aged between 18 and 25 who had high levels of stress, the levels being evaluated by a standardized instrument - Perceived Stress Scale (PSS), and willing to give their informed consent were part of the study. There were specific exclusions from the study, including students suffering with serious mental health illnesses, such as schizophrenia or severe depression, since their involvement with the intervention or assessments could be implicated.

Tools

Three tools were used for the study. The Perceived Stress Scale (PSS) provides quantitative information about the impact of the intervention on stress through a comparison of the student's state and their perceived level of stress before and after the intervention. The Psychological Flexibility Questionnaire (PFQ-2) assesses students' psychological flexibility by their ability to be open and engaged in life despite trying times. Finally, a Demographic Questionnaire is given so that some background information is established about the participants including specifics such as age, gender, and academic year which could be used as variables in data analysis.

Data Collection Procedure

The data was collected in three steps. Pre-intervention, subjects of the experiment and control groups were administered the PSS and PFQ-2 as a pre-test. For four weeks, the experimental group was given eight sessions of ACT (Acceptance and Commitment Therapy). In the control group, no intervention was given. To compare the two groups' post-intervention improvements in psychological flexibility and stress levels, the PSS and PFQ-2 are given to both groups as a post-test.

Data Analysis

The data was analyzed using SPSS. Using descriptive statistics like mean, standard deviation, and frequency distribution, the demographic information and pre-test findings were described. To examine how psychological flexibility and stress levels changed within each group, paired sample t-tests were applied to the pre- and post-test scores of the control and experimental groups. The post-test results between the two groups was compared using independent sample t-tests. Lastly, Cohen's d was used to calculate the intervention's effect size, which indicated how much the intervention had effected psychological flexibility and stress reduction.

Result and Discussion

Table 1: Impact of psychological flexibility, acceptance, and mindfulness on stress.

Hypotheses	Beta Coefficient	R^2	F	t-value	p-value
H_1a	0.269	0.438	22.798*	6.16	0.00
H_1b	0.183			4.53	0.00
H_1c	-0.085			-2.77	0.08

Table 2 examines the impact of psychological flexibility, acceptance, and mindfulness on stress using hypotheses H_1a, H_1b, and H_1c. Hypothesis H_1a, which investigates the connection between psychological flexibility and stress, demonstrates a high positive link with a positive Beta coefficient of 0.269. A statistically significant p-value of 0.00, a high F-value of 22.798, and a model that explains 43.8% of the variation in stress (R^2 = 0.438) all support the effect. Hypothesis H_1b, which assesses the connection between acceptance and stress, states that higher levels of acceptance are associated with higher levels of stress. Additionally, it is significant (p = 0.00) and has a positive beta coefficient of 0.183. However, with a negative beta coefficient of -0.085, a t-value of -2.77, and a p-value of 0.08,

Hypothesis H_1c, which evaluates the relationship between stress and mindfulness, finds a non-significant inverse relationship between the two. According to this model, stress is statistically significantly influenced by psychological acceptance and flexibility, while mindfulness has no appreciable impact.

Table 2: Impact of psychological flexibility, acceptance, and mindfulness on anxiety.

Hypotheses	Beta Coefficient	R^2	F	t-value	p-value
H_2a	0.324	0.493	23.375*	7.22	0.00
H_2b	0.106			3.04	0.04
H_2c	-0.107			-3.22	0.02

The effects of acceptance, mindfulness, and psychological flexibility on anxiety are assessed by hypotheses H_2a, H_2b, and H_2c in Table 2. Investigating the relationship between psychological flexibility and anxiety, Hypothesis H_2a shows a strong beneficial influence with a positive Beta coefficient of 0.324. A strong F-value of 23.375, a very significant p-value of 0.00, and a model that accounts for 49.3% of the variation in anxiety (R^2 = 0.493) all support the association. There is a significant but less noticeable positive influence from hypothesis H_2b, which looks at the relationship between acceptance and anxiety, with a t-value of 3.04, a p-value of 0.04, and a positive beta coefficient of 0.106. Hypothesis H_2c, on the other hand, looks at how mindfulness affects anxiety and demonstrates a strong inverse link with a negative Beta coefficient of -0.107, a t-value of -3.22, and a p-value of 0.02. These results imply that, although psychological adaptation and acceptance are positively connected with anxiety, mindfulness significantly reduces anxiety.

Table 3: Impact of psychological flexibility, acceptance, and mindfulness on Depression.

Hypotheses	Beta Coefficient	R^2	F	t-value	p-value
H_3a	0.328	0.598	27.220**	7.40	0.00
H_3b	0.148			3.90	0.00
H_3c	-0.161			-4.41	0.00

In Table 3, the effects of acceptance, mindfulness, and psychological flexibility on depression are examined using hypotheses H_3a, H_3b, and H_3c. A significant positive effect is demonstrated by Hypothesis H_3a, which examines the relationship between psychological flexibility and depression, with a positive beta coefficient of 0.328. With a strong F-value of 27.220, a very significant p-value of 0.00, and an explanation of 59.8% of the variance in depression (R^2 = 0.598), the model supports the association. Hypothesis H_3b, which investigates the connection between depression and acceptance, shows a positive beta coefficient of 0.148, a significant t-value of 3.90, and a p-value of 0.00. However, with a significant p-value of 0.00, a t-value of -4.41, and a negative Beta coefficient of -0.161,

Hypothesis H_3c, which assesses the effect of mindfulness on depression, demonstrates a potent inverse association. While mindfulness significantly reduces depression, psychological flexibility and acceptance are generally positively connected with depression.

Table 4: Moderating Effects of Demographic Variables on Psychological Flexibility and Its Impact.

Moderator Variable	Variables	Beta	t-value	p-value	Significant (p<0.05)
Gender (H_4a)	Psychological Flexibility	0.380	2.643	0.010	Yes
	Gender	0.017	0.058	0.057	No
	Psychological Flexibility × Gender	-0.117	-0.391	0.005	Yes
Stream (H_4b)	Psychological Flexibility	0.167	2.516	0.033	Yes
	Stream	-0.362	-2.398	0.166	No
	Psychological Flexibility × Stream	0.453	2.621	0.008	Yes
Social Status (H_4c)	Psychological Flexibility	0.470	4.062	0.003	Yes
	Social Status	0.221	0.852	0.397	No
	Psychological Flexibility × Social Status	-0.296	-0.960	0.340	No
Area of Living (H_4d)	Psychological Flexibility	-0.082	-1.483	0.013	Yes
	Area of Living	-0.573	-3.134	0.036	Yes
	Psychological Flexibility × Area of Living	0.780	3.580	0.011	Yes

Table 4 shows that several demographic characteristics such as gender, academic stream, socioeconomic status, and type of place of residence moderated the psychological flexibility versus its impact relationship. The interaction term (Psychological Flexibility × Gender) was statistically significant with a beta of -0.117 and a p-value of 0.005 which showed that gender moderated the relationship between psychological flexibility and its impact. This supports hypothesis H_4a, indicating that the effect of psychological flexibility is different for women and men and that the relation is weaker for one gender than for the other. Since the interaction between psychological flexibility and stream is significant (Beta = 0.453, p = 0.008), the academic stream also moderates the relation, meaning that the psychological flexibility has a different impact depending on the academic stream.

This lends support to hypothesis H_4b. However, the interaction term (Psychological Flexibility × Social Status) is non-significant with a p value of 0.340, such that social status does not change the influence of psychological flexibility and therefore does not provide support for hypothesis H_4c. This means that there is no significant moderation of association through social status. The interaction term (Psychological Flexibility × area of Living) has a strong effect with a beta of 0.780 and p = 0.011, meaning that the location in which people stay moderation very notably affects the relationship between psychological flexibility and its impact. This supports the hypothesis H_4d that the effects of

psychological flexibility differ depending on the residence of being in the urban or rural locations.

CONCLUSION

This study concludes by giving much importance to the role played by Acceptance and Commitment Therapy, in an effort to improve psychological flexibility among the students of Bengaluru universities, who are highly under stress. The findings have shown the significance of mindfulness, acceptance, and psychological flexibility in reducing psychological discomfort related to stress, anxiety, and depression. ACT encouraged a more flexible attitude toward both thoughts and feelings, and was an intervention that helped children better cope with some of the emotional challenges and academic pressure. In addition, moderating effects of demographics such as socioeconomic status, gender, and academic stream were useful in adding new information to impact personal characteristics on the outcomes of therapy. These findings suggest that ACT may be an effective strategy in enhancing the students' mental health, especially in environments where levels of stress are high. In effect, ACT enables students with the tools to work through their feelings and address stress, therefore improving their general wellbeing in the long run. The study also concludes that colleges need to consider including these psychological therapies, such as ACT, in their student wellness programs to help improve support in mental health and the overall academic experience.

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