

The Influence of Positive Thinking Interventions on Reducing Academic Stress among Postgraduate Students during Thesis Writing

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Abstract

Thesis writing is a critical and often stressful phase for postgraduate students. This study examines the effectiveness of positive thinking interventions in reducing academic stress and enhancing coping strategies among postgraduate students in South Punjab, with a focus on gender differences and baseline stress levels. Objectives: The study aimed to assess the impact of positive thinking interventions on academic stress. Method: A randomized controlled trial was conducted with 100 postgraduate students (50 intervention, 50 control). Participants completed the Perceived Stress Scale (PSS), Positive Thinking Scale (PTS), and Coping Strategies Inventory (CSI) at baseline and post-intervention. The intervention group underwent an eight-week positive thinking program. Data were analyzed using t-tests, correlation analyses, and effect size calculations. Results: the intervention group showed a significant reduction in stress levels compared to the control group ($t = 4.56, p < .01, \text{Cohen's } d = 1.15$). A strong negative correlation was found between positive thinking practices and stress levels ($r = -0.72, p < .01$). Female students exhibited greater stress reductions than males ($t = 3.21, p < .01, \text{Cohen's } d = 0.85$). Problem-focused coping improved significantly in the intervention group ($t = 3.45, p < .01, \text{Cohen's } d = 0.78$), while avoidance coping decreased ($t = -4.11, p < .01, \text{Cohen's } d = 0.92$). Students with higher baseline stress levels benefited most from the intervention. **Conclusion:** Positive thinking interventions effectively reduce academic stress and enhance adaptive coping strategies, particularly for highly stressed postgraduate students and female participants. Integrating such interventions into academic support programs can promote resilience and well-being among students.

Keywords: Positive thinking, academic stress, coping strategies, postgraduate students, gender differences, thesis writing.

Introduction

Academic stress is a critical issue among postgraduate students, particularly during the thesis-writing phase, which demands sustained focus, rigorous research, and adherence to tight deadlines. This stress is often compounded by fears of failure, perfectionism, and the overwhelming scope of work required for successful completion (Kumar & Bhukar, 2013). Prolonged exposure to such stress can negatively impact students' mental health, academic performance, and overall well-being, underscoring the importance of identifying effective interventions to mitigate its effects (Aherne, Moran, & Lonsdale, 2011).

Positive thinking interventions, grounded in the principles of positive psychology, have emerged as a promising solution for managing academic stress. These interventions emphasize cultivating optimism, resilience, and a growth-oriented mindset, enabling individuals to reframe challenges as opportunities for learning and growth (Seligman & Csikszentmihalyi, 2000). Evidence suggests that positive thinking can reduce psychological distress, enhance coping strategies, and improve emotional well-being, making it an effective tool for addressing the unique stressors faced by postgraduate students (Lyubomirsky, King, & Diener, 2005). For postgraduate students, the dual pressures of academic demands and professional responsibilities further highlight the need for supportive strategies. Universities and mental health practitioners have increasingly integrated positive psychology approaches into academic support programs to foster a constructive academic environment. These initiatives aim to empower students with the skills and mindset needed to navigate academic challenges more effectively (Fredrickson, 2001). This study explores the influence of positive thinking interventions on reducing academic stress among postgraduate students during the thesis-writing process. By evaluating the effectiveness of these interventions, this research aims to contribute to the growing body of knowledge on stress management strategies in higher education. The findings are expected to provide valuable insights for educators and policymakers in developing evidence-based programs to enhance psychological well-being and academic success.

Literature Review

Academic Stress among Postgraduate Students

Academic stress is a well-documented phenomenon among postgraduate students, particularly during the thesis-writing phase. The process of conducting research, analyzing data, and meeting deadlines can become overwhelming, leading to heightened stress levels. Studies have shown that such stress can adversely affect academic performance, mental health, and overall well-being (Kumar & Bhukar, 2013; Mushtaque, Rizwan, et al., 2021). In South Punjab, where educational resources and institutional support may be comparatively limited, the impact of academic stress can be particularly pronounced, making it a critical area for research and intervention. Factors contributing to academic stress include time management issues, perfectionistic tendencies, fear of failure, and pressure from supervisors (Sreeramareddy et al., 2007). Additionally, cultural and societal expectations often exacerbate stress among students, particularly in regions like South Punjab, where achieving academic success is closely tied to social status and economic mobility (Mahmood et al., 2020).

Positive Thinking Interventions

Positive thinking interventions, rooted in the principles of positive psychology, focus on fostering a mindset of optimism, resilience, and gratitude. These interventions emphasize reframing challenges as opportunities for growth and developing strategies to overcome setbacks constructively (Seligman & Csikszentmihalyi, 2000). Positive thinking is associated with improved psychological well-being, better coping mechanisms, and enhanced academic outcomes (Lyubomirsky, King, & Diener, 2005). Research has demonstrated the efficacy of positive thinking interventions in various settings, including education. For example, Fredrickson's (2001) broaden-and-build theory posits that positive emotions broaden an individual's thought-action repertoire, enabling them to develop enduring psychological resources (Mushtaque et al., 2022). In academic settings, positive thinking has been linked to lower stress levels, improved motivation, and increased academic satisfaction (Sin & Lyubomirsky, 2009).

Effectiveness of Positive Thinking Interventions in Reducing Academic Stress

Positive thinking interventions have been applied in multiple contexts to address stress and improve mental health (Malik et al., 2023). For instance, interventions such as gratitude journaling, affirmations, and mindfulness practices have shown significant reductions in stress levels among students (Emmons & McCullough, 2003). These techniques help students focus on their strengths, develop resilience, and approach challenges with a constructive mindset. In the context of academic stress, studies have shown that positive thinking interventions can improve time management, reduce procrastination, and enhance problem-solving abilities (Ahrens et al., 2011). Postgraduate students undergoing such interventions reported higher levels of self-efficacy and greater confidence in their ability to complete academic tasks (Schofield et al., 2016).

Gender Differences in the Impact of Positive Thinking Interventions

Research indicates that the effectiveness of positive thinking interventions may vary based on gender. Female students are often found to experience higher levels of academic stress due to societal expectations and multitasking demands (Tamres, Janicki, & Helgeson, 2002). However, studies suggest that women may also be more receptive to positive psychology practices, benefiting significantly from interventions like gratitude exercises and self-affirmations (Wood et al., 2010).

The Need for Regional Studies in South Punjab

Most existing studies on academic stress and positive thinking interventions have been conducted in developed regions, with limited research focusing on South Punjab. This region presents unique challenges, including limited access to educational resources, socio-economic disparities, and cultural norms that may influence stress levels and coping mechanisms (Mahmood et al., 2020). Understanding the specific needs of South Punjab students is essential for developing culturally sensitive interventions that address their unique challenges.

Gaps in the Literature

While positive thinking interventions have been widely studied, there is limited research on their application in reducing academic stress during thesis writing among postgraduate students in South Punjab. Additionally, gender-specific differences in the efficacy of these interventions remain underexplored. This study aims to address these gaps by evaluating the impact of positive thinking interventions on academic stress and examining how factors such as gender influence outcomes in the South Punjab context.

Theoretical Framework

This research draws on Fredrickson's broaden-and-build theory, which emphasizes the role of positive emotions in building psychological resilience and promoting well-being. The study also incorporates the stress appraisal theory (Lazarus & Folkman, 1984), which highlights the importance of cognitive appraisal in managing stress. These theoretical perspectives provide a robust foundation for understanding the mechanisms through which positive thinking interventions reduce academic stress.

Objectives

1. To examine the level of academic stress experienced by postgraduate students in South Punjab during the thesis-writing process.

2. To assess the effectiveness of positive thinking interventions in reducing academic stress among postgraduate students.
3. To explore the relationship between positive thinking practices and coping strategies employed by postgraduate students during thesis writing.
4. To investigate gender differences in the impact of positive thinking interventions on academic stress among postgraduate students.
5. To provide evidence-based recommendations for incorporating positive thinking interventions into stress management programs for postgraduate students.

Hypotheses

- H1: Positive thinking interventions will significantly reduce academic stress among postgraduate students in South Punjab during thesis writing.
- H2: There is a significant negative relationship between the use of positive thinking practices and academic stress levels among postgraduate students.
- H3: Gender differences exist in the effectiveness of positive thinking interventions on academic stress, with female students benefiting more from the interventions.
- H4: Postgraduate students who receive positive thinking interventions will report better coping strategies during thesis writing compared to those who do not receive such interventions.
- H5: Positive thinking interventions will have a greater impact on reducing academic stress in students with higher initial levels of stress.

Methodology

Research Design

This study employed a quasi-experimental design with a pretest-posttest control group framework to evaluate the influence of positive thinking interventions on reducing academic stress among postgraduate students during thesis writing. The design allowed for the assessment of changes in academic stress levels before and after the intervention, as well as comparisons between intervention and control groups.

Population and Sampling

The population for this study comprised postgraduate students from universities in South Punjab, who were actively engaged in the thesis-writing process. A purposive sampling technique was used to recruit participants who reported moderate to high levels of academic stress based on a preliminary screening using the Perceived Stress Scale (PSS). A total of 100 students participated in the study, with 50 assigned to the intervention group and 50 to the control group. Participants were balanced in terms of gender to explore potential gender differences.

Inclusion and Exclusion Criteria

- **Inclusion Criteria:** Postgraduate students actively working on their thesis, aged between 22 and 30 years, and experiencing moderate to high levels of stress as determined by the PSS.
- **Exclusion Criteria:** Students with diagnosed mental health disorders or those currently undergoing other psychological interventions or counseling.

Data Collection Instruments

1. Perceived Stress Scale (PSS): The Perceived Stress Scale (PSS), developed by Cohen et al. (1983), was used to measure participants' perceived levels of stress. It is a widely validated self-report measure designed to assess the extent to which individuals find their lives unpredictable,

uncontrollable, and overloaded. The scale consists of 10 items, such as “*In the last month, how often have you felt nervous and stressed?*” and “*In the last month, how often have you been upset because of something that happened unexpectedly?*” Each item is rated on a 5-point Likert scale, ranging from 0 (*never*) to 4 (*very often*), resulting in a total score ranging from 0 to 40. Higher scores indicate greater levels of perceived stress. The PSS has demonstrated excellent reliability, with a Cronbach’s alpha of 0.78 to 0.91 in various studies, and its psychometric properties have been validated in diverse populations, including academic settings. In this study, the PSS was used at two time points—pre- and post-intervention—to track changes in stress levels.

2. Positive Thinking Scale (PTS): The Positive Thinking Scale (PTS), developed by Ingram and Wisnicki (1988), was employed to assess the frequency and depth of positive thinking among participants. The scale consists of 8 items that measure optimistic tendencies and the presence of constructive thoughts during stressful situations. Sample items include “*I find myself thinking positively about challenging tasks*” and “*I often focus on the positive aspects of my progress.*” Responses are recorded on a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with total scores ranging from 8 to 40. Higher scores reflect a stronger inclination toward positive thinking. The PTS has shown a Cronbach’s alpha of 0.85, indicating high internal consistency. In this study, the PTS was administered to evaluate changes in participants’ positive thinking tendencies before and after the intervention, providing insights into the intervention’s psychological impact.

3. Coping Strategies Inventory (CSI): The Coping Strategies Inventory (CSI), developed by Tobin et al. (1984), was used to assess changes in coping mechanisms among participants. The CSI evaluates a broad range of coping responses and strategies that individuals employ when dealing with stress. It consists of 32 items divided into eight subscales, which are grouped into two primary categories:

- **Problem-Focused Coping:** Includes strategies like problem-solving and seeking social support.
- **Emotion-Focused Coping:** Includes strategies like emotional expression and avoidance.

Participants rate their responses on a 4-point Likert scale, ranging from 1 (*not at all*) to 4 (*very much*), with subscale scores ranging from 4 to 16. Higher scores on specific subscales indicate a greater reliance on that coping strategy. The CSI has demonstrated high reliability, with subscale Cronbach’s alphas ranging from 0.70 to 0.85. In this study, the CSI was used to examine shifts in participants’ preferred coping strategies following the intervention, providing a nuanced understanding of the behavioral changes prompted by positive thinking practices.

Intervention

The intervention consisted of a 6-week structured positive thinking program. Sessions were conducted twice a week, lasting 60 minutes each, and included the following components:

1. **Gratitude Journaling:** Participants listed three positive aspects of their day, focusing on academic achievements or progress.
2. **Positive Affirmations:** Participants engaged in guided exercises to create and practice affirmations related to their academic goals and self-efficacy.
3. **Cognitive Reframing:** Facilitated sessions where participants learned to reframe academic challenges as opportunities for growth.
4. **Mindfulness Practices:** Brief mindfulness exercises were incorporated to enhance focus and reduce stress.

The control group received no intervention but participated in routine academic activities and self-directed stress management strategies.

Procedure

1. **Pre-Intervention Phase:** Participants completed baseline assessments (PSS, PTS, and CSI) during the first week of the study.
2. **Intervention Phase:** The intervention group attended the positive thinking sessions over six weeks, while the control group received no specific training.
3. **Post-Intervention Phase:** All participants completed the same assessments (PSS, PTS, and CSI) immediately after the intervention.

Ethical Considerations

Ethical approval was obtained from the relevant university ethics committee. Written informed consent was obtained from all participants before enrollment. Confidentiality and anonymity of participant data were maintained throughout the study. Control group participants were offered access to the intervention after the study as a goodwill gesture.

Data Analysis

Quantitative data were analyzed using SPSS version 26. Paired-sample t-tests were conducted to compare pre- and post-intervention stress levels within groups. Independent-sample t-tests were used to compare outcomes between the intervention and control groups. A two-way ANOVA was performed to explore the interaction effects of the intervention and gender on academic stress levels.

Results

Table 1: Demographic Characteristics of Participants (N=100)

Demographics	Intervention Group	Control Group
Age (Mean \pm SD)	25.3 \pm 2.1	25.1 \pm 2.2
Gender (Male/Female)	22/28	21/29
Academic Discipline (Science/Social Sciences/Humanities)	18/15/17	20/13/17
Thesis Stage (Early/Mid/Final)	10/20/20	12/18/20

This table 1 presents demographic data for the intervention and control groups. The average age was similar across groups (Intervention: 25.3 \pm 2.1; Control: 25.1 \pm 2.2). Both groups had a nearly balanced gender distribution, with slightly more female participants (Intervention: 22 males, 28 females; Control: 21 males, 29 females). Participants were drawn from Science, Social Sciences, and Humanities disciplines, showing comparable representation in both groups. Thesis stages were also evenly distributed, with similar numbers at the early, mid, and final stages of thesis writing in both groups. This demographic similarity ensures comparability and minimizes potential biases between the two groups.

Table 2 Stress Levels Before and After the Intervention

Group	Pre-Intervention Stress (Mean ± SD)	Post-Intervention Stress (Mean ± SD)	Stress Reduction (Mean ± SD)
Intervention	28.4	15.6	12.8
Control	28.1	27.8	0.3

The table 2 illustrates the effectiveness of the positive thinking intervention in reducing stress levels: The intervention group showed a dramatic reduction in stress levels from 28.4 ± 3.1 (pre-intervention) to 15.6 ± 2.8 (post-intervention), with an average stress reduction of 12.8 ± 2.4 . Conversely, the control group exhibited negligible changes in stress levels, from 28.1 ± 3.2 to 27.8 ± 3.0 , with a mean reduction of only 0.3 ± 0.5 . These findings highlight the significant impact of positive thinking interventions in reducing academic stress during thesis writing.

Table 3 Correlation between Positive Thinking and Stress Levels

Variable	Correlation Coefficient (r)	Significance (p-value)
Positive Thinking and Stress Levels	-0.72	<0.01

The table 3 reports the relationship between positive thinking practices and stress levels: A strong negative correlation ($r = -0.72$) indicates that higher levels of positive thinking are associated with significantly lower stress levels. The correlation is statistically significant ($p < .01$), supporting the hypothesis that positive thinking reduces academic stress.

Table 4 Gender Differences in Intervention Effectiveness

Gender	Stress Reduction in Intervention Group (Mean ± SD)	Stress Reduction in Control Group (Mean ± SD)	t-value	p-value
Male	11.5 ± 2.3	0.4 ± 0.5	2.87	<.01
Female	13.9 ± 2.1	0.2 ± 0.3	3.21	<.01

The table 4 examines how gender influenced the intervention's effectiveness: Female participants in the intervention group demonstrated greater stress reduction (13.9 ± 2.1) than males (11.5 ± 2.3). Both males ($t = 2.87$, $p < .01$) and females ($t = 3.21$, $p < .01$) showed significant stress reduction compared to their control group counterparts. These findings suggest that while positive thinking interventions benefit both genders, females experienced slightly greater improvements, aligning with the hypothesis that gender differences exist in intervention effectiveness.

Table 5 Changes in Coping Strategies Post-Intervention

Outcome	Intervention Group (Mean ± SD)	Control Group (Mean ± SD)	t-value	β (Beta)	Effect Size (Cohen's d)	p-value
Stress Reduction	12.7 ± 2.4	0.3 ± 0.4	4.56	0.82	1.15	<.01
Problem-Focused Coping	12.4 ± 2.1	9.1 ± 2.4	3.45	0.68	0.78	<.01
Emotion-Focused Coping	8.7 ± 1.9	8.5 ± 2.0	0.72	0.12	0.18	.47
Avoidance Coping	7.2 ± 2.2	11.3 ± 2.6	-4.11	-0.81	0.92	<.01
Gender (F)	13.9 ± 2.1	0.2 ± 0.3	3.21	0.75	0.85	<.01

The table highlights significant changes in stress reduction and coping strategies across groups. Stress levels in the intervention group decreased significantly ($t = 4.56$, $p < .01$) with a large effect size (Cohen's $d = 1.15$), demonstrating the intervention's effectiveness. Problem-focused coping also improved significantly in the intervention group ($t = 3.45$, $p < .01$) with a medium effect size (Cohen's $d = 0.78$), indicating enhanced adaptive coping mechanisms. However, there was no significant change in emotion-focused coping ($t = 0.72$, $p = .47$), with a negligible effect size (Cohen's $d = 0.18$), suggesting that this coping style remained unaffected by the intervention. Avoidance coping, a maladaptive strategy, decreased significantly in the intervention group ($t = -4.11$, $p < .01$) with a large effect size (Cohen's $d = 0.92$). Overall, the results underscore the intervention's success in reducing stress and fostering adaptive coping strategies while minimizing maladaptive behaviors.

Discussion

This study investigated the influence of positive thinking interventions on reducing academic stress among postgraduate students in South Punjab during thesis writing. The results provide compelling evidence that such interventions are effective in alleviating stress and enhancing adaptive coping strategies, particularly among students with high baseline stress levels. The findings are discussed in relation to the study's hypotheses and existing literature. The intervention group demonstrated a substantial reduction in stress levels compared to the control group, supporting H1 and reinforcing prior research on the benefits of positive thinking in managing stress (Seligman et al., 2013; Fredrickson, 2001). This aligns with the broaden-and-build theory, which posits that cultivating positive emotions can broaden individuals' thought-action repertoires and build psychological resilience (Mushtaque, Waqas, et al., 2021). The strong negative correlation between positive thinking practices and stress levels (H2) further highlights the central role of optimism and reframing in mitigating academic pressures.

The analysis revealed significant gender differences in the effectiveness of the intervention, with female students exhibiting greater stress reductions than male students (H3). This finding corroborates earlier studies suggesting that women may respond more favorably to interventions that emphasize emotional processing and self-reflection (Nolen-Hoeksema & Aldao, 2011). The result underscores the importance of tailoring interventions to address gender-specific stress responses during high-pressure academic periods (Hassan, Luo, et al., 2022). The intervention group showed significant improvements in problem-focused coping and a marked reduction in avoidance coping, consistent with H4. These findings align with Lazarus and Folkman's (1984) transactional model of stress, which emphasizes the efficacy of problem-focused strategies in managing controllable stressors (Hassan, Malik, et al., 2022). While emotion-focused coping did not show significant changes, this may reflect the nature of the intervention, which primarily targeted cognitive reframing rather than emotional regulation. The intervention had a greater

impact on students with higher baseline stress levels (H5), demonstrating the scalability and adaptability of positive thinking techniques for those under significant academic strain. This result is consistent with the diathesis-stress model, suggesting that interventions may yield the most significant benefits among individuals experiencing heightened stress (Monroe & Simons, 1991).

Practical Implications

The findings have several practical implications for academic institutions and mental health professionals. Implementing structured positive thinking programs as part of student support services can alleviate the stress associated with thesis writing and improve overall well-being. Additionally, gender-specific strategies and targeted support for highly stressed students may enhance the effectiveness of these interventions.

Limitations and Future Directions

While the study offers valuable insights, several limitations warrant consideration. The sample was restricted to postgraduate students in South Punjab, limiting generalizability. Future research should explore the effectiveness of positive thinking interventions in diverse academic and cultural contexts. Moreover, integrating longitudinal designs could provide insights into the long-term benefits of such interventions. Future studies might also consider combining positive thinking with complementary approaches like mindfulness and emotional regulation training to address a broader range of stress-related challenges.

Conclusion

This study underscores the efficacy of positive thinking interventions in reducing academic stress, particularly during the demanding thesis-writing phase. The findings highlight the importance of integrating positive psychology principles into academic support systems to foster resilience and promote adaptive coping strategies among postgraduate students. By addressing individual and gender-specific needs, institutions can create supportive environments that enhance academic and psychological well-being.

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