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RESEARCH ARTICLE

The Efficacy of Emotion-Focused Therapy on Psychosomatic Complaints, Anhedonia, and Rumination in Students with Generalized Anxiety Disorder

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Abstract

Generalized Anxiety Disorder (GAD) is characterized by persistent and uncontrollable worry accompanied by cognitive, emotional, and somatic disturbances that substantially impair students' psychological well-being and academic functioning. Given the central role of maladaptive emotional processing in the maintenance of GAD, the present study aimed to examine the efficacy of Emotion-Focused Therapy (EFT) in reducing psychosomatic complaints, anhedonia, and rumination among university students diagnosed with GAD. This study employed a quasi-experimental pretest–posttest design with a control group. The study population consisted of students diagnosed with GAD at Tarbiat Modares University during the 2025–2026 academic year. Thirty-six students were selected through purposive sampling and randomly assigned to either an experimental group (n = 18) or a control group (n = 18). The experimental group participated in ten 90-minute sessions of EFT. Data were collected using the Generalized Anxiety Disorder Questionnaire (Spitzer et al., 2006), the Psychosomatic Complaints Scale (Takata & Sakata, 2004), the Rumination Questionnaire (Nolen-Hoeksema & Morrow, 1991), and the Snaith–Hamilton Pleasure Scale (Snaith et al., 1995). Data analysis was conducted using multivariate analysis of covariance in SPSS version 27. The findings demonstrated that EFT produced significant reductions in psychosomatic complaints ($F = 72.18$, $p = 0.001$, $\eta^2 = 0.70$), anhedonia ($F = 69.42$, $p = 0.001$, $\eta^2 = 0.69$), and rumination ($F = 57.83$, $p = 0.001$, $\eta^2 = 0.65$) among students with GAD. Overall, the results underscore the effectiveness of EFT in alleviating the multidimensional emotional, cognitive, and somatic symptoms of GAD, highlighting its potential as an integrative and mechanism-based intervention for enhancing psychological resilience and functional outcomes in student populations.

Keywords: Emotion-Focused Therapy, Psychosomatic Complaints, Anhedonia, Rumination, Generalized Anxiety Disorder.

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Introduction

Anxiety, particularly Generalized Anxiety Disorder (GAD), is a debilitating condition characterized by persistent and excessive worry that disrupts cognitive, emotional, and physiological functioning (Martínez-Vázquez et al., 2023). In university students, GAD often manifests as continuous concern over academic performance, social evaluation, and future outcomes, leading to impaired concentration, memory difficulties, and reduced capacity for effective problem-solving (Trindade et al., 2021). Neurobiological research implicates hyperactivity of the amygdala and dysregulation in prefrontal cortical networks as underlying mechanisms, while chronic stress may elevate cortisol levels, further exacerbating cognitive and emotional dysfunction (Byrd-Bredbenner et al., 2020). These challenges highlight the importance of early identification and the implementation of targeted interventions, such as cognitive-behavioral therapy, mindfulness-based practices, and structured academic support, to promote both psychological well-being and academic success (Lu et al., 2025). Alipour et al. (2025) reported that in their cross-sectional study of 970 adults in Tehran, the prevalence of GAD symptoms was 26% (95% CI: 22%–32%) in the urban study population.

Anxiety often manifests not only emotional or cognitive distress but also as physical symptoms that reflect the body's chronic response to stress (Grigorian et al., 2023). In GAD, this somatic dimension is particularly pronounced, creating a close link between persistent worry and bodily sensations (Monterrosa-Castro et al., 2020). Individuals frequently experience discomfort or dysfunction in multiple organ systems, even in the absence of identifiable medical causes, illustrating the inseparability of mind and body in anxiety pathology (DeGeorge et al., 2022). In GAD, psychosomatic complaints represent a core manifestation, reflecting the intricate interplay between chronic emotional distress and somatic functioning (Kumar et al., 2019). Individuals with GAD frequently report a spectrum of physical symptoms, including persistent muscle tension, gastrointestinal disturbances, cardiovascular irregularities, and headaches, which often arise in the absence of identifiable medical pathology (Li et al., 2023). The presence of psychosomatic symptoms amplifies functional impairment, as physical discomfort and anxiety reinforce one another in a self-perpetuating cycle (Iwasaki et al., 2026).

Chronic anxiety can profoundly alter emotional experience, reducing the capacity to feel pleasure or interest in daily activities (ZH et al., 2026). In individuals with GAD, this emotional blunting is not simply a mood fluctuation but a sustained alteration in the brain's reward processing mechanisms (Trøstheim et al., 2020). This diminished responsiveness to positive stimuli contributes to functional impairment and withdrawal from social and academic engagement (Zhang et al., 2023). Anhedonia in GAD reflects profound disturbances in reward processing and affective experience, wherein chronic worry and pervasive tension diminish the capacity to derive pleasure or motivation from previously enjoyable activities (Collins et al., 2025). Neuroimaging studies indicate that hyperactivity in the amygdala, coupled with dysregulation of mesolimbic dopaminergic pathways, underlies the blunted hedonic response observed in anxious individuals (Barthel et al., 2020). In students and adults with GAD, this manifests as emotional withdrawal, decreased engagement in social and academic activities,

and a persistent sense of dissatisfaction or emotional flattening, compounding the cognitive and functional deficits associated with chronic anxiety (Zandpour et al., 2024).

Anxiety often perpetuates itself through repetitive patterns of thought that trap the mind in cycles of worry (Leung et al., 2022). Rumination, a hallmark feature of GAD, exemplifies this cognitive entrapment, where individuals repeatedly focus on potential threats, failures, or negative outcomes (Sheykhangafshe et al., 2026). This habitual preoccupation intensifies emotional distress and interferes with adaptive problem-solving (Hirsch et al., 2021). Rumination constitutes a central cognitive feature of GAD, characterized by repetitive, uncontrollable, and often self-critical thoughts focused on potential threats or negative outcomes (Joubert et al., 2022). This persistent cognitive preoccupation intensifies worry, prolongs emotional distress, and impairs executive functioning, particularly working memory and problem-solving capacity (Martínez et al., 2020). Neurobiologically, rumination in GAD is associated with hyperconnectivity within the default mode network (DMN) and insufficient prefrontal inhibitory control over limbic structures, perpetuating cycles of maladaptive thought (Stade & Ruscio, 2023). Among students and high-functioning individuals, such rumination contributes to attentional deficits, procrastination, and heightened perception of stress, creating a reinforcing loop that exacerbates the severity and persistence of anxiety symptoms (Rickerby et al., 2024).

Emotion-Focused Therapy (EFT) has increasingly gained empirical attention across diverse clinical populations and psychological disorders, including depression, trauma-related difficulties, and interpersonal problems. Evidence from these clinical contexts suggests that EFT can facilitate adaptive emotional processing, strengthen emotion regulation, and improve broader psychological functioning by helping individuals access, differentiate, process, and transform maladaptive emotional experiences. This growing body of research underscores the transdiagnostic relevance of EFT while also suggesting that its therapeutic effects may vary across clinical populations and presenting problems (Timulak et al., 2022; Keogh & Timulak, 2023). Against this broader empirical background, applying EFT to GAD is particularly relevant because persistent worry may serve as a maladaptive strategy for avoiding, regulating, or suppressing distressing emotional experiences. Although traditional approaches to GAD have primarily emphasized cognitive and behavioral mechanisms, emerging evidence indicates that difficulties in emotional processing and regulation may also play a central role in the maintenance of chronic anxiety (Timulak et al., 2022). Accordingly, EFT provides a theoretically coherent framework for addressing these underlying emotional processes by facilitating greater awareness, processing, and transformation of core emotional experiences, thereby potentially reducing the persistent worry and anxiety characteristic of GAD (Keogh & Timulak, 2023). EFT has been applied to GAD based on the understanding that persistent worry reflects underlying difficulties with emotional awareness and regulation (Lee et al., 2025). In GAD, chronic anxiety often functions as a strategy to avoid or suppress primary emotions such as fear, sadness, or shame (Newman & Zainal, 2020). EFT directly addresses these maladaptive emotional patterns, facilitating the identification, processing, and transformation of core emotional experiences that sustain anxiety symptoms (Wiebe et al., 2025). Clinical

observations indicate that EFT can lead to substantial reductions in excessive worry, tension, and cognitive preoccupation characteristic of GAD (Li, 2023). By promoting the experiential activation of avoided emotions and restructuring emotional responses, EFT helps individuals with GAD reduce the intensity of anxious arousal and increase tolerance of distressing internal states (Shahar, 2020). This process not only diminishes anxiety symptoms but also enhances emotional clarity and self-understanding, addressing the root mechanisms of generalized anxiety rather than merely its surface manifestations (Timulak et al., 2020). Further evidence from intervention studies suggests that EFT produces durable changes in both affective and cognitive domains in GAD. Individuals undergoing EFT demonstrate improved ability to recognize and articulate emotions, reduced rumination, and decreased hypervigilance, all of which contribute to lowered anxiety levels (Harte et al., 2020). These outcomes highlight EFT as a potent therapeutic approach for GAD, emphasizing the centrality of emotion processing in alleviating chronic worry and promoting adaptive emotional functioning (Aardal et al., 2026).

GAD in students is characterized by a complex constellation of symptoms, including psychosomatic complaints, anhedonia, and persistent rumination, which collectively undermine both psychological well-being and academic functioning. Despite the profound impact of these symptoms, interventions that directly target the underlying emotional dysregulation in GAD remain limited. EFT, with its emphasis on facilitating awareness, processing, and transformation of core emotions, represents a promising approach to address these multidimensional manifestations. Investigating the efficacy of EFT on psychosomatic complaints, anhedonia, and rumination in students with GAD is therefore essential, as it not only advances our understanding of emotion-based mechanisms in anxiety but also provides an empirically grounded framework for enhancing mental health and academic performance in this vulnerable population.

Methods

Setting and Participants

The present study employed a quasi-experimental pretest–posttest design with a control group. The target population consisted of students at Tarbiat Modares University with symptoms of GAD during the 2025–2026 academic year. GAD symptoms were assessed using the Generalized Anxiety Disorder-7 (GAD-7) questionnaire developed by Spitzer et al. (2006). Participants scoring above the predetermined cutoff score of 12 on the GAD-7 were considered eligible for inclusion. From this pool, 36 students were selected and randomly assigned to either the experimental group (n = 18) or the control group (n = 18) using a lottery method. The required sample size was calculated using G*Power software based on parameters appropriate for analysis of covariance. Key inputs included the desired statistical power (≥ 0.80), a significance level ($\alpha = 0.05$), and an estimated effect size derived from prior empirical findings or pilot data. This procedure ensured adequate statistical sensitivity to detect meaningful between-group differences.

Inclusion criteria were: (a) providing written informed consent, (b) obtaining a GAD-7 score above 12, (c) being between 22 and 40 years of age, and (d) willingness to participate throughout the intervention period. Exclusion criteria included: (a) current diagnosis of severe psychiatric disorders (e.g., psychotic disorders, bipolar disorder, or severe major depressive disorder), (b) current substance use disorder, (c) severe neurological or medical conditions that could interfere with participation, (d) ongoing participation in other structured psychological treatments, (e) changes in psychiatric medication during the intervention period, (f) absence from more than two treatment sessions, (g) incomplete questionnaire responses, and (h) clinically significant worsening of GAD symptoms requiring referral for alternative treatment during the intervention period. All procedures were conducted in strict accordance with the ethical standards of the Declaration of Helsinki. Written informed consent was obtained from all participants, and the confidentiality and anonymity of personal data were rigorously maintained throughout the study. It should be noted that GAD status was determined using the standardized GAD-7 self-report questionnaire rather than a structured clinical diagnostic interview.

Research Tools

Generalized Anxiety Disorder-7 (GAD-7): Anxiety symptoms were assessed using the Generalized Anxiety Disorder-7 (GAD-7) developed by Spitzer et al. (2006). The GAD-7 is a seven-item self-report questionnaire designed to assess the severity of generalized anxiety symptoms. Items are rated on a 4-point Likert scale ranging from 0 (not at all) to 3 (nearly every day), yielding a total score between 0 and 21, with higher scores indicating greater anxiety severity. In the present study, a cutoff score of 12 or higher was used to identify participants eligible for inclusion. In the original validation study, the GAD-7 demonstrated excellent internal consistency (Cronbach's $\alpha = 0.92$) and good test–retest reliability ($r = 0.83$) (Spitzer et al., 2006). In the current sample, the scale demonstrated good internal consistency, with a Cronbach's alpha coefficient of 0.86.

The Psychosomatic Complaints Scale (PCS) was developed and validated by Takata and Sakata (2004) to assess psychosomatic symptoms in adolescents. The instrument comprises 30 items and is based on a unidimensional factor structure. Each item is rated on a four-point Likert scale ranging from 0 (never) to 3 (frequently). Total scores range from 0 to 90, with scores above 45 suggesting clinically significant psychosomatic symptomatology. Concurrent validity was established through correlations with the Goldberg General Health Questionnaire, yielding a coefficient of 0.64 across two independent studies. Construct validity was examined using exploratory factor analysis, which indicated that a single factor accounted for 34.1% of the total variance. The scale demonstrated excellent internal consistency, with a Cronbach’s alpha coefficient of 0.93. Furthermore, inter-component correlations across three separate administrations were reported to be 0.50 or higher, supporting the scale’s internal coherence and stability. In the present study, Cronbach's alpha coefficient of this scale was reported as 0.90.

Rumination Questionnaire (RQ): This scale was developed by Nolen-Hoeksema and Morrow in 1991 and has 22 items. The items of this scale are scored based on a four-option Likert scale from never (1) to always (4). As a result, the range of scores is between 22 and 88, and higher scores indicate higher rumination. Nolen-Hoeksema and Morrow (1991) evaluated the content validity of this scale as favorable and reported its reliability in the retest method from 0.48 to 0.82. Also, its reliability coefficient was obtained by Cronbach's alpha method of 0.90. In the present study, Cronbach's alpha coefficient was 0.82.

Snaith–Hamilton Pleasure Scale (SHAPS): SHAPS is a widely used and well-validated self-report instrument for assessing anhedonia, defined as a reduced capacity to experience pleasure (Snaith et al., 1995). This scale consists of 14 items designed to measure hedonic capacity across various domains of daily pleasurable experiences. Respondents indicate their level of agreement on a five-point Likert scale (ranging from 0 = strongly disagree to 4 = strongly agree), with higher total scores reflecting greater capacity for pleasure and lower scores indicating reduced hedonic responsiveness. The SHAPS has demonstrated satisfactory psychometric properties, including adequate construct validity and reliability, making it a robust tool for research and clinical settings (Snaith et al., 1995). In the present study, Cronbach's alpha coefficient of this scale was reported as 0.88.

Emotion-Focused Therapy (EFT): Before the intervention, participants completed research questionnaires as part of the pre-test phase. Subsequently, 18 students received EFT, delivered individually by a therapist over ten 90-minute sessions across two months (Greenberg & Goldman, 2019). Following the completion of the intervention, all participants completed the post-test and responded to the research questionnaires again. To reduce dropout, the importance of commitment was emphasized during initial interviews and reinforced throughout the sessions, fostering a sense of solidarity that supported group cohesion. For ethical reasons, participants assigned to the control group were offered and received the same EFT intervention after completion of the post-test assessments and the conclusion of the study. A summary of the EFT sessions for students with GAD is presented in Table 1.

Table 1. Summary of the Emotion-Focused Therapy.

Session	Objective	Main Content
1	Introduction to the EFT Program	Establishing therapeutic alliance and commitment; administering pre-test; psychoeducation about GAD and its relationship with emotional processes; clarifying treatment goals; identifying behavioral, cognitive, physical, and emotional symptoms
2	Emotional Awareness and Assessment	Exploring the presenting problem; identifying maladaptive emotional schemes; assessing emotional processing style; facilitating awareness and acceptance of painful emotions
3	Accessing Primary Emotions	Evoking core maladaptive emotions through experiential techniques; exploring attachment-related needs and unresolved emotional experiences

Session	Objective	Main Content
4	Deepening Emotional Experience	Facilitating emotional expression; enhancing awareness, acceptance, and regulation of emotions; deepening access to primary adaptive emotions
5	Transforming Emotions	Differentiating primary, secondary, and instrumental emotions; using chair work (e.g., two-chair dialogue) to transform maladaptive emotions
6	Resolving Emotional Blocks	Working through emotional avoidance, interruptions, and blocks; increasing tolerance for emotional experience
7	Consolidation of Emotional Change	Strengthening adaptive emotional responses; restructuring maladaptive interaction patterns; symbolizing unmet needs
8	Experiential Integration	Promoting experiential insight; identifying recurring relational themes; linking present difficulties to internalized representations of self and significant others
9	Self-Reorganization	Working with residual emotional imagery using body-focused and experiential techniques; consolidating a new sense of self; generalizing gains to future situations
10	Reconstruction and Termination	Developing new coping solutions; reconstructing and reframing the problem narrative; reviewing progress and preparing for termination

Data Collection and Analysis

The study population comprised all students enrolled at Tarbiat Modares University during the 2025–2026 academic year. In the initial screening phase, 395 students were assessed. After applying the eligibility criteria, 36 students who met the diagnostic criteria for GAD were selected as the final sample (see Figure 1). Data were analyzed using both descriptive and inferential statistical methods. Descriptive statistics, including means and standard deviations, were calculated to summarize the data. To examine between-group differences while controlling for baseline scores, analysis of covariance was conducted in accordance with its underlying assumptions. All statistical analyses were performed using SPSS version 27, and the level of statistical significance was set at $p < 0.05$.

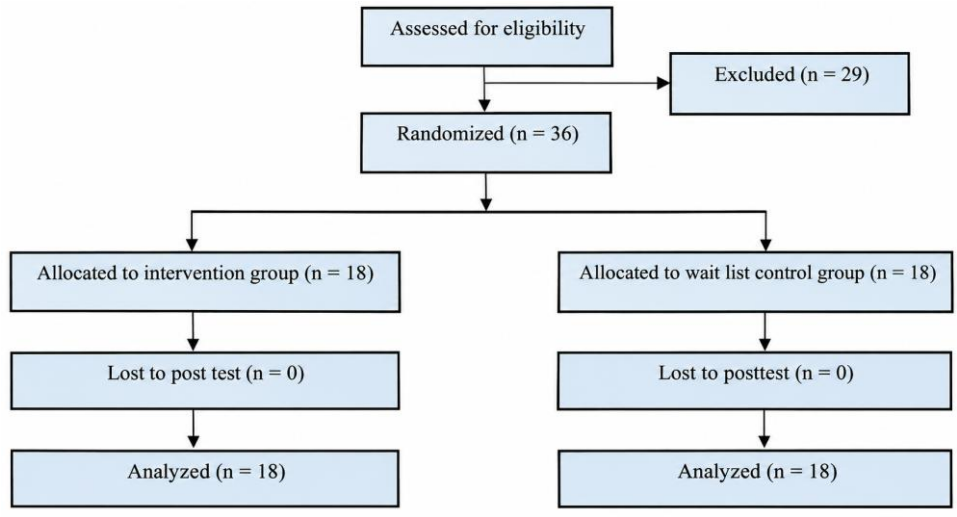


Figure 1. The CONSORT flow diagram of the study.

Research Results

The mean age of students with GAD in the experimental group was 27.55 (SD=3.65), and the control group was 26.93 (SD=3.41) years. The chi-square test was used to check demographic information in students with GAD, and the results are reported in Table 2.

Table 2. Demographic Information for Students.

	Experimental Group		Control Group		Chi-square (P-value)
Gender	**Frequency**	**Percentage**	**Frequency**	**Percentage**	
Female	11	61.1	10	55.6	P=0.099
Male	7	38.9	8	44.4	
Marital status	**Frequency**	**Percentage**	**Frequency**	**Percentage**	
Married	7	38.9	9	50	P=0.084
Single	11	61.1	9	50	
Education	**Frequency**	**Percentage**	**Frequency**	**Percentage**	
Masters	9	50	8	44.4	P=0.079
PhD	9	50	10	55.6	

The chi-square test results showed that the intervention and control groups had no significant differences in gender, marital status, and education (P>0.05). The mean and SD of pre-test-post-test scores of psychosomatic complaints, anhedonia, and rumination in students with GAD in the experimental and control groups are presented in Table 3. Also in this table, the Shapiro-Wilk test (S-W) results are reported to check the normality of the distribution of variables in the two groups. According to this table, the Shapiro-Wilk statistics are not significant for all variables. Therefore, it can be concluded that the distribution of variables is normal (Table 3).

Table 3. Descriptive Indices of the Study's Variables in Control and Experimental Groups.

Variables		Groups	Mean	SD	S-W	P*
GAD	Pre-test	Experimental	13.25	2.62	0.115	0.074
		Control	12.89	2.80	0.096	0.056
	Post-test	Experimental	10.25	2.14	0.102	0.064
		Control	14.05	2.37	0.117	0.060
Psychosomatic Complaints	Pre-test	Experimental	56.72	1.96	0.092	0.057
		Control	57.33	2.30	0.099	0.061
	Post-test	Experimental	48.27	4.32	0.110	0.077
		Control	57.66	1.90	0.114	0.074
Anhedonia	Pre-test	Experimental	27.72	1.70	0.100	0.058
		Control	27.16	1.72	0.091	0.063
	Post-test	Experimental	22.11	2.61	0.097	0.051
		Control	28.72	1.93	0.108	0.079
Rumination	Pre-test	Experimental	52.50	1.51	0.103	0.068
		Control	51.72	2.29	0.090	0.053
	Post-test	Experimental	46.44	3.14	0.095	0.066
		Control	52.83	1.94	0.121	0.084

**** Shapiro-Wilk test***

MANCOVA was conducted to evaluate the efficacy of EFT on psychosomatic complaints, anhedonia, and rumination among students with GAD. Prior to conducting the analysis, the assumptions of multivariate analysis of covariance were examined. The results of Levene's test for assessing the homogeneity of variances indicated that the variances of psychosomatic complaints, anhedonia, and rumination were homogeneous across the experimental and control groups ($p > 0.05$). Furthermore, Box's M test was performed to evaluate the equality of covariance matrices of the dependent variables between the groups. The results indicated that the covariance matrices were not significantly different between the experimental and control groups (Box's M = 40.35, F = 0.98, p = 0.304), confirming that this assumption was satisfied.

Additionally, the results of the Bartlett's test of sphericity indicated a significant relationship among psychosomatic complaints, anhedonia, and rumination ($\chi^2 = 119.20$, df = 21, $p < 0.05$), supporting the appropriateness of conducting multivariate analysis. Another important assumption of MANCOVA, the homogeneity of regression slopes, was examined by testing the interaction between the pre-test scores of the dependent variables and the intervention condition. The interaction effects were not statistically significant, indicating that the assumption of homogeneity of regression slopes was met. Given that the assumptions of MANCOVA were satisfied, this statistical approach was considered appropriate. Subsequently, MANCOVA was performed to examine between-group differences in psychosomatic complaints, anhedonia, and rumination after controlling pre-test scores (Table 4).

Table 4. The Results of Multivariate Analysis of Covariance on Mean Post-Test Scores.

Test	Value	F	df	Error df	P	Effect Value
Pillai's Trace	0.752	29.365	3	29	<0.001	0.75
Wilks Lambda	0.248	29.365	3	29	<0.001	0.75
Hotelling Trace	3.038	29.365	3	29	<0.001	0.75
Roy's Largest Root	3.038	29.365	3	29	<0.001	0.75

According to Table 4, the results indicated a significant multivariate effect of the independent variable (EFT intervention) on the dependent variables. In other words, the experimental and control groups differed significantly in the combined scores of psychosomatic complaints, anhedonia, and rumination. Based on the calculated effect size, the intervention explained 75% of the variance in the combined dependent variables, indicating a large effect of EFT. Moreover, the statistical power of the analysis was 1.00, suggesting that the sample size was sufficient to detect the observed effect. To determine which specific dependent variables contributed to the significant multivariate effect, follow-up univariate analyses of covariance (ANCOVAs) were conducted within the MANCOVA framework, and the results are presented in Table 5.

Table 5. Results of Univariate Analysis of Covariance on the Mean of Post-Test Scores of Dependent Variables in Experimental and Control Groups.

Variables	SS	SS Error	DF	MS	MS Error	F	P	Effect Value
Psychosomatic Complaints	691.41	296.95	1	691.41	9.57	72.18	<0.001	0.70
Anhedonia	366.78	163.78	1	366.78	5.28	69.42	<0.001	0.69
Rumination	362.34	194.21	1	362.34	6.26	57.83	<0.001	0.65

Based on the content in Table 5, the F statistic is significant for psychosomatic complaints (F=72.18), anhedonia (F=69.42), and rumination (F=57.83) at the 0.001 threshold. These findings indicate that there is a significant difference between the groups in these variables. Additionally, based on the determined effect value, 70% of the psychosomatic complaints, 69% of the anhedonia, and 65% of the rumination were independent of the effect of the variable. As a result, it can be stated that EFT significantly decreases psychosomatic complaints, anhedonia, and rumination in students with GAD.

Discussion

The present study aimed to examine the efficacy of EFT in reducing psychosomatic complaints, anhedonia, and rumination among students with GAD. Considering the central role of maladaptive emotional processing in maintaining GAD, EFT was hypothesized to alleviate these multidimensional symptoms by enhancing emotional awareness, processing, and restructuring. The results provide compelling evidence that EFT effectively targets these core manifestations of GAD, offering a promising intervention for students experiencing chronic anxiety.

The results clearly indicate that EFT significantly reduced psychosomatic complaints in students with GAD. Chronic anxiety often manifests physically through symptoms such as muscle tension, headaches, and gastrointestinal disturbances, reflecting heightened physiological arousal associated with persistent worry (Timulak et al., 2022). By facilitating the processing and transformation of underlying emotions, EFT appears to mitigate these somatic expressions of anxiety, reducing both the intensity and frequency of physical discomfort (Aardal et al., 2026). Furthermore, the reduction in psychosomatic complaints underscores the theoretical perspective that GAD is maintained by chronic emotional avoidance (Li, 2023). EFT's focus on experiential engagement with avoided emotions disrupts the cycle linking cognitive worry and somatic hyperarousal, highlighting the efficacy of emotion-centered interventions in addressing the mind-body interplay inherent in GAD. Finally, the sustained decrease in psychosomatic symptoms observed after EFT suggests long-term regulatory effects on physiological stress responses (Lee et al., 2025). By targeting core emotional processes, EFT not only alleviates immediate physical manifestations but may also enhance resilience to future stressors, which is particularly relevant in academic settings where stress is pervasive.

The findings demonstrated that EFT effectively reduced anhedonia in students with GAD. Chronic worry and hypervigilance in GAD often impair engagement with rewarding or

pleasurable experiences, blunting hedonic responsiveness. EFT promotes access to and processing core emotions, restoring the capacity to experience pleasure and satisfaction, which is essential for functional and emotional well-being (Newman & Zainal, 2020). Additionally, the observed improvements in hedonic capacity suggest that EFT may positively influence neural circuits associated with reward processing (Harte et al., 2020). By reducing emotional avoidance and facilitating the resolution of negative affective states, EFT enhances motivational and affective responsiveness, enabling students to re-engage with meaningful and rewarding activities (Wiebe et al., 2025). The decrease in anhedonia also has implications for social and academic functioning (Keogh & Timulak, 2023). Students who regain the ability to experience pleasure are more likely to participate in learning activities and maintain social interactions, contributing to resilience against chronic anxiety and supporting overall psychosocial adjustment.

The results also indicated that EFT significantly reduced rumination in students with GAD. Repetitive and uncontrollable negative thought patterns are a central cognitive feature of GAD, perpetuating chronic worry and emotional distress. EFT's focus on emotional processing disrupts these habitual cognitive cycles, allowing students to reduce excessive preoccupation with distressing thoughts (Lee et al., 2025). This reduction in rumination emphasizes that GAD is sustained not solely by maladaptive cognition but by unprocessed emotional experiences (Aardal et al., 2026). By fostering awareness and transformation of core emotions, EFT provides an alternative to persistent rumination, enabling students to process rather than suppress emotional experiences (Timulak et al., 2020). Moreover, decreased rumination contributes to broader functional improvements, including enhanced attentional control, problem-solving abilities, and overall psychological resilience (Shahar, 2020). These findings demonstrate the integrative impact of EFT, revealing that targeting emotional processes can simultaneously ameliorate cognitive and behavioral manifestations of GAD (Baharloo et al., 2026).

Despite the promising findings, several limitations should be considered. Although the sample size was determined through power analysis and was statistically adequate, the use of purposive sampling for the initial identification and recruitment of eligible participants may limit the generalizability of the findings to broader student populations. However, after the eligible participants were selected, they were randomly assigned to the experimental and control groups using a lottery method, which helped minimize allocation bias and enhance the internal validity of the study. In addition, GAD status was identified using the standardized GAD-7 self-report questionnaire rather than a structured clinical diagnostic interview. Therefore, the possibility of diagnostic misclassification or the presence of unrecognized psychiatric comorbidities cannot be entirely excluded, and the findings should be interpreted with appropriate caution. Furthermore, the reliance on self-report instruments may have introduced response bias or subjective distortion in symptom reporting. The absence of long-term follow-up assessment also restricts conclusions regarding the durability and maintenance of treatment effects over time. Finally, conducting the study within a single university context may constrain the external validity of the results across diverse cultural and educational settings. Future

research should replicate these findings across different universities and demographic groups, incorporate structured clinical interviews to establish diagnostic accuracy and assess psychiatric comorbidities, include longitudinal follow-up assessments to evaluate the stability of treatment effects, and adopt multi-method assessment strategies, including clinician-rated and behavioral measures, to enhance methodological rigor. From an applied perspective, the integration of Emotion-Focused Therapy into university counseling centers, the development of structured emotion-regulation programs, and the implementation of early screening initiatives for students with elevated anxiety symptoms may contribute substantially to improving psychological resilience and reducing the academic and psychosocial burden associated with GAD.

Conclusion

The present study provides robust evidence that EFT exerts a significant impact on the multidimensional symptomatology of GAD in student populations. By directly addressing maladaptive emotional processing, EFT was shown to produce substantial reductions in psychosomatic complaints, restore hedonic capacity, and attenuate ruminative cognitive patterns. These findings highlight the centrality of emotion regulation as a mechanistic pathway in the maintenance of GAD, suggesting that interventions that facilitate emotional awareness, processing, and transformation can yield profound improvements across somatic, affective, and cognitive domains. Importantly, the integrative effects of EFT underscore its capacity to address the interrelated nature of anxiety symptoms: somatic manifestations often reflect unprocessed emotional distress, anhedonia arises from chronic avoidance and hypervigilance, and rumination perpetuates both emotional and physiological dysregulation. By intervening at the level of core emotional experiences, EFT disrupts these feedback loops, fostering enhanced psychological resilience, adaptive coping, and functional engagement in academic and social contexts.

Collectively, these results not only reinforce the theoretical foundations of EFT as an emotion-centered intervention but also provide empirical support for its applicability in high-stress student populations. The therapy's capacity to produce comprehensive improvements across multiple dimensions of GAD emphasizes its potential as a scalable, mechanism-based approach to enhancing mental health, promoting emotional well-being, and mitigating the pervasive impact of chronic anxiety in educational settings. In sum, EFT offers a scientifically grounded, clinically relevant, and theoretically coherent framework for targeting the underlying emotional processes that sustain generalized anxiety, highlighting its significance as a transformative approach for both research and practice.

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