

# Effectiveness of Ellis's Rational Emotive Behavior Therapy on Perceived Stress and Alexithymia in Single Women

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### ABSTRACT

The aim of the present study was to determine the effectiveness of Ellis's Rational Emotive Behavior Therapy (REBT) on perceived stress and alexithymia. This study employed a quasi-experimental design with a pretest-posttest control group. Questionnaire administration was conducted in person. The statistical population of this study included all undergraduate female psychology students enrolled in the 2022 academic year at Islamic Azad University, Khomeini Shahr Branch. Sampling in this study was conducted using convenience sampling, and 30 undergraduate female psychology students from Islamic Azad University, Khomeini Shahr Branch, were selected. From this group of 30 participants, 15 were randomly assigned to the experimental group and 15 to the control group. The data were collected using the Perceived Stress Scale (PSS; Cohen et al., 1983) and the Toronto Alexithymia Scale (TAS-20; Bagby et al., 1994). The results indicated that Ellis's Rational Emotive Behavior Therapy had a statistically significant effect on perceived stress and alexithymia. In addition, Ellis's Rational Emotive Behavior Therapy had a statistically significant effect on the subscales of alexithymia, including difficulty identifying feelings, difficulty describing feelings, and externally oriented thinking ( $p < .05$ ). Therefore, it can be concluded that Ellis's Rational Emotive Behavior Therapy can be used to improve perceived stress and alexithymia.

**Keywords:** *Ellis's Rational Emotive Behavior Therapy, perceived stress, alexithymia.*

## 1. Introduction

In recent years, rapid technological, social, and academic changes have profoundly altered the psychological experiences of university students, leading to heightened vulnerability to stress-related and emotion-regulation difficulties. University students are frequently exposed to academic pressure, role transitions, uncertainty about future employment, and extensive digital engagement, all of which can contribute to elevated perceived stress and maladaptive emotional functioning. Perceived stress, defined as the degree to which individuals appraise life situations as unpredictable, uncontrollable, and overwhelming, has been consistently linked to adverse psychological and academic outcomes among students (Cao et al., 2025; Marendić et al., 2024; Zhang, 2025). Within this context, understanding the emotional and cognitive mechanisms that exacerbate or buffer stress responses has become a central concern in contemporary psychological research.

One construct that has gained increasing attention in relation to stress and psychological maladjustment is alexithymia. Alexithymia refers to a multidimensional personality trait characterized by difficulty identifying feelings, difficulty describing feelings to others, and a cognitive style oriented toward external events rather than internal emotional experiences. Empirical evidence indicates that alexithymia is prevalent among student populations and is associated with a wide range of mental health problems, including depression, anxiety, emotional dysregulation, and impaired interpersonal functioning (Lu et al., 2024; Sun et al., 2024; Xu et al., 2025). Importantly, alexithymia has been shown to intensify the impact of stressors by limiting individuals' capacity to cognitively process and regulate emotional responses, thereby increasing psychological vulnerability (Hu et al., 2025; X. Liu et al., 2024).

Recent studies have further demonstrated that perceived stress and alexithymia are not independent phenomena but are dynamically and reciprocally related. Longitudinal and cross-lagged research suggests that higher levels of perceived stress predict subsequent reductions in self-efficacy and emotional clarity, while deficits in emotional awareness and expression, characteristic of alexithymia, contribute to heightened stress perception over time (Cao et al., 2025; Y. Liu et al., 2024). This bidirectional relationship is particularly salient in academic environments, where students with alexithymic tendencies may struggle to seek social support or engage in adaptive coping strategies,

thereby reinforcing stress cycles (Mafi et al., 2025; Wen et al., 2024).

In parallel with these emotional vulnerabilities, excessive reliance on smartphones and digital technologies has emerged as a significant psychosocial issue among young adults. Nomophobia, defined as the fear or anxiety of being without access to a mobile phone, has been identified as a prevalent phenomenon among university and high school students. Nomophobia has been consistently associated with elevated perceived stress, sleep disturbances, attentional problems, and emotional dysregulation (G & Y, 2022; Tams et al., 2018). Importantly, emerging evidence indicates a robust association between nomophobia and alexithymia, suggesting that individuals with impaired emotional awareness may rely more heavily on digital devices as maladaptive emotion-regulation tools (Aktaş Terzioğlu & Büber, 2025; Han et al., 2025).

Several empirical studies have highlighted the mediating and moderating roles of alexithymia in the relationship between stress-related variables and maladaptive behaviors. For example, alexithymia has been shown to mediate the relationship between childhood emotional abuse and suicidal ideation, as well as between psychological maltreatment and depressive symptoms among college students (Hu et al., 2025; X. Liu et al., 2024). Similarly, research in educational settings has demonstrated that alexithymia plays a central role in linking academic stressors to negative emotional outcomes such as burnout, procrastination, and negative affect (Cao et al., 2025; Mafi et al., 2025). These findings underscore the importance of targeting alexithymia and stress simultaneously in preventive and interventional efforts.

From a theoretical perspective, Rational Emotive Behavior Therapy (REBT), originally developed by Albert Ellis, provides a robust cognitive-emotional framework for addressing maladaptive stress responses and emotional dysfunction. REBT posits that psychological distress is largely maintained by irrational beliefs—rigid, absolutistic, and illogical evaluations of events—rather than by events themselves. According to this model, dysfunctional emotional outcomes such as anxiety, stress, and emotional inhibition arise from irrational cognitive appraisals, which can be modified through structured cognitive, emotional, and behavioral interventions (Ellis, 2013). Given its emphasis on emotional awareness, cognitive restructuring, and behavioral change, REBT is theoretically well suited to addressing both perceived stress and alexithymia.

Empirical evidence supports the effectiveness of REBT in reducing stress, irrational beliefs, and maladaptive emotional responses across diverse populations. Studies conducted in educational contexts have shown that REBT significantly improves stress management, emotional regulation, and psychological well-being among teachers, students, and student-athletes (Elvins et al., 2025; Onuigbo et al., 2018). Furthermore, recent research has demonstrated the applicability of REBT in modifying ethically problematic and stress-related behaviors in academic settings, highlighting its versatility and cultural adaptability (Ocheni et al., 2025). These findings suggest that REBT-based interventions may be particularly beneficial for university students experiencing high levels of perceived stress and emotional processing difficulties.

Despite the growing body of literature on perceived stress, alexithymia, and REBT, several gaps remain. First, much of the existing research has examined these constructs in isolation or through correlational designs, limiting causal inferences. Second, although studies have explored the associations between alexithymia, stress, and technology-related behaviors such as nomophobia, intervention-based research targeting these variables simultaneously remains scarce (Aktaş Terzioğlu & Büber, 2025; Han et al., 2025). Third, there is a relative lack of controlled experimental studies focusing on female undergraduate students, a group that may be particularly vulnerable to emotional suppression and stress due to sociocultural and academic pressures.

Moreover, recent cross-cultural research emphasizes that emotional processing styles and stress perceptions are shaped by cultural norms and educational contexts, underscoring the need for context-specific intervention studies (Marendić et al., 2024; Wen et al., 2024). In this regard, examining the effectiveness of REBT among undergraduate psychology students provides both theoretical and practical value, as these students are not only exposed to high academic demands but are also future mental health professionals whose emotional competencies are critically important.

Integrating findings from recent psychological research, it is evident that perceived stress and alexithymia function as central mechanisms linking cognitive appraisals, emotional dysregulation, and maladaptive coping behaviors. Interventions that directly address irrational beliefs, enhance emotional awareness, and promote adaptive coping may therefore yield significant improvements in students' psychological functioning. REBT, with its structured focus on cognitive, emotional, and behavioral change, represents a

promising intervention framework for addressing these interconnected issues (Ellis, 2013; Elvins et al., 2025).

Given the increasing prevalence of stress-related difficulties, emotional processing deficits, and technology-related anxieties among university students, there is a pressing need for empirically grounded interventions that can effectively reduce perceived stress and alexithymia. Building on recent empirical and theoretical advances, the present study seeks to contribute to the literature by experimentally examining the impact of Ellis's Rational Emotive Behavior Therapy on perceived stress and alexithymia among single undergraduate female psychology students.

The aim of the present study was to determine the effectiveness of Ellis's Rational Emotive Behavior Therapy on reducing perceived stress and alexithymia in single undergraduate female psychology students.

## 2. Methods and Materials

### 2.1. Study Design and Participants

The method of the present study was quantitative and quasi-experimental. In this study, a pretest including nomophobia, perceived stress, and alexithymia was first administered to both the control and experimental groups. Subsequently, Ellis's Rational Emotive Behavior Therapy (REBT) was delivered to the experimental group in eight 90-minute sessions, while the control group did not receive any intervention. At the end of the intervention, both the control and experimental groups were reassessed on the variables of nomophobia, perceived stress, and alexithymia.

The statistical population of this study included all undergraduate female psychology students at Khomeini Shahr University who were enrolled during the 2021–2022 academic year. Given that the statistical population was clearly defined, convenience sampling was used. Initially, by visiting the university and obtaining information on the number of single undergraduate female psychology students, 120 questionnaires were distributed. Among them, 30 individuals who obtained high scores on nomophobia, perceived stress, and alexithymia were selected as the sample. These participants were then randomly assigned to the experimental group ( $n = 15$ ) and the control group ( $n = 15$ ).

The inclusion criteria were: (1) regular attendance in the therapy sessions, and (2) having perceived stress and alexithymia. The exclusion criteria were: (1) occurrence of

specific psychological problems or adverse life events for the participants, and (2) withdrawal from the study or absence from more than two sessions.

## 2.2. Measures

**Perceived Stress Questionnaire:** The Perceived Stress Scale (PSS) was developed by Cohen et al. (1983) and consists of 14 items designed to measure general perceived stress over the past month. This scale assesses thoughts and feelings related to stressful events, perceived control, coping with psychological pressure, and experienced stress. It also examines risk factors associated with behavioral disorders and reflects the process of stress-related relationships. Doran et al. (2006) reported a Cronbach's alpha coefficient of .74 for this scale. Cohen et al. (1983) reported criterion validity coefficients ranging from .52 to .76 based on correlations with cognitive appraisal measures. In the study by Behroozi et al. (2012), reliability was assessed using Cronbach's alpha and split-half methods, yielding coefficients of .73 and .74, respectively. Construct validity coefficients, calculated through simple correlation with a researcher-developed criterion item, were reported as .63, which was statistically significant at the .05 level. Scoring is based on a five-point Likert scale, with scores of 5 ("very often"), 4 ("often"), 3 ("sometimes"), 2 ("almost never"), and 1 ("never"). This questionnaire has been widely used in various countries and has been translated, standardized, and normed in many languages. In the present study, the 14-item version of the scale was used (Cohen et al., 1983), and its reliability, assessed using Cronbach's alpha, was .75.

**Alexithymia Questionnaire:** The original form of the alexithymia scale consisted of 26 items and was developed by Taylor et al. (1985). It was later revised by Bagby et al. (1994) and reduced to a 20-item form. Bagby et al. (1994) found that, in their validation study, the Toronto Alexithymia Scale (TAS-20) consisted of three structural factors consistent with the construct of alexithymia. Other studies have also supported these findings (Parker et al., 1996, as cited in Afshari, 2008). The TAS-20 includes 20 items scored on a five-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). A total alexithymia score is obtained by summing the scores of the 20 items, with items 4, 10, 18, and 19 scored in reverse. The minimum and maximum possible scores are 20 and 100, respectively (Bagby et al., 1994). In most studies, a cutoff score of 60 to 61 has been used for the total TAS-20 score, derived from a small clinical sample; however, no specific

cutoff points have been established separately for each subscale (Bagby et al., 1994). The TAS-20 comprises three subscales: difficulty identifying feelings, difficulty describing feelings, and externally oriented thinking. Ghaseminejad (2011), in a study conducted on 78 patients with asthma and a comparison group of healthy individuals, reported Cronbach's alpha coefficients of .71 for the total scale, .60 for difficulty describing feelings, .72 for difficulty identifying feelings, and .51 for externally oriented thinking. In the study by Karimi Rad (2013), the reliability of this scale was examined in a primary sample of 600 participants using Cronbach's alpha. The results indicated alpha coefficients of .69 for the total scale, .74 for difficulty identifying feelings, .67 for difficulty describing feelings, and .55 for externally oriented thinking. Zhao et al. (2021), in a study of nonclinical Korean adolescents aged 12–18 years, reported a Cronbach's alpha coefficient of .87 for this scale.

## 2.3. Intervention

The Rational Emotive Behavior Therapy (REBT) intervention package was implemented in accordance with the framework proposed by Ellis (2013) and was delivered in eight structured group sessions, each lasting 90 minutes. The first session focused on participant admission, establishing therapeutic rapport, clarifying group rules such as confidentiality, punctuality, and active participation, introducing the goals of the program, familiarizing participants with the rational-emotive-behavioral approach and irrational beliefs, exploring each member's presenting problems, and assigning homework. The second session reviewed previous assignments and emphasized the role of thoughts and beliefs in psychological well-being, increased participants' awareness of how irrational beliefs contribute to emotional difficulties, and enhanced motivation for counseling and treatment. The third session included a review of homework, discussion of real-life events through group dialogue to illustrate the impact of beliefs on mental health, instruction in the ABC model, and examination of the role of irrational "musts" and "shoulds" in problem formation. The fourth session concentrated on helping participants identify irrational beliefs and training them in disputation techniques through role-playing and rational-emotive imagery. The fifth session involved teaching and practicing cognitive, emotional, and behavioral techniques such as relaxation, shame-attacking exercises, humor, self-management, and assertive expression. The sixth session addressed strategies for preventing psychological problems,

included group-based practical exercises, and concluded with collective summarization and assignment of new tasks. The seventh session reviewed preventive strategies, revisited key concepts from the previous sessions, introduced advanced relaxation techniques, continued work on irrational demands, and practiced replacing irrational thoughts with rational alternatives through group exercises. The eighth and final session was devoted to comprehensive review and integration of all previous content, responding to remaining questions, consolidating practical application of REBT techniques, obtaining participant feedback and satisfaction, administering the posttest, and formally concluding the intervention.

#### 2.4. Data analysis

Data analysis was performed using SPSS software version 26. Descriptive statistics, including means and

standard deviations, were calculated to summarize the characteristics of the study variables at the pretest and posttest stages. To examine the effectiveness of the intervention while controlling for baseline differences, one-way analysis of covariance (ANCOVA) was conducted, with pretest scores entered as covariates and group (experimental vs. control) as the independent variable. Statistical significance was evaluated at the .05 level.

### 3. Findings and Results

The results indicate that, in the experimental group and the control group, 53.3% and 66.7% of the participants, respectively, were aged 20 years or younger. In the experimental and control groups, 46.7% and 40% of the participants, respectively, had entered the university in the 2020 academic year.

**Table 1**

*Comparison of Means and Standard Deviations of the Experimental and Control Groups on Perceived Stress and Alexithymia at the Pretest and Posttest Stages*

Variable	Stage	Experimental Group M	Experimental Group SD	Control Group M	Control Group SD
Perceived Stress	Pretest	50.13	7.29	50.06	3.03
	Posttest	45.13	7.05	50.40	3.22
Alexithymia	Pretest	63.33	3.81	62.66	8.92
	Posttest	54.13	2.61	62.13	7.21

As presented in Table 1, the descriptive statistics indicate that at the pretest stage, the experimental and control groups had similar mean scores on perceived stress ( $M = 50.13$ ,  $SD = 7.29$  for the experimental group;  $M = 50.06$ ,  $SD = 3.03$  for the control group) and alexithymia ( $M = 63.33$ ,  $SD = 3.81$  for the experimental group;  $M = 62.66$ ,  $SD = 8.92$  for the control group), suggesting baseline comparability between groups. At the posttest stage, the experimental group showed a noticeable reduction in perceived stress ( $M = 45.13$ ,  $SD = 7.05$ ) and alexithymia ( $M = 54.13$ ,  $SD = 2.61$ ), whereas the control group exhibited no meaningful change in perceived stress ( $M = 50.40$ ,  $SD = 3.22$ ) or alexithymia ( $M = 62.13$ ,  $SD = 7.21$ ), indicating that improvements over time were observed primarily in the experimental group.

Before conducting the analysis of covariance (ANCOVA), the underlying statistical assumptions were examined. The assumption of normality of the dependent variables was assessed using skewness and kurtosis indices

as well as the Shapiro–Wilk test, and the results indicated that the distributions of perceived stress and alexithymia scores did not significantly deviate from normality. Homogeneity of variances across groups was evaluated using Levene’s test, which showed nonsignificant results, confirming equality of error variances between the experimental and control groups. The assumption of homogeneity of regression slopes was tested by examining the interaction between the covariate (pretest scores) and group membership, and the interaction effect was not statistically significant, indicating that the relationship between the covariate and the dependent variables was consistent across groups. In addition, the linearity assumption between the covariates and the dependent variables was supported, and the independence of observations was ensured by the study design. Therefore, all key assumptions required for conducting ANCOVA were satisfactorily met.



**Table 2**

*One-Way Analysis of Covariance (ANCOVA) for Perceived Stress and Alexithymia Scores in the Study Groups*

Dependent Variable	Source	Sum of Squares	df	Mean Square	F	p	$\eta^2$	Power
Perceived Stress	Pretest	703.468	1	703.468	152.141	< .001	.859	1.00
	Group	200.039	1	200.039	43.263	< .001	.634	1.00
	Error	4.624	25	4.624				
	Total	695.01	30					
Alexithymia	Pretest	699.461	1	699.461	158.797	< .001	.864	1.00
	Group	628.925	1	628.925	142.784	< .001	.851	1.00
	Error	110.119	25	4.405				
	Total	2505.0	30					

As shown in Table 2, there was a statistically significant difference between the groups at the  $p < .01$  level. Given that the mean perceived stress score of the experimental group at the posttest stage was lower than that of the control group, this difference favors the experimental group. This indicates that Ellis's Rational Emotive Behavior Therapy was effective in reducing perceived stress among single undergraduate female psychology students at Islamic Azad University, Khomeini Shahr Branch, at the posttest stage.

Similarly, a statistically significant difference between the groups was observed at the  $p < .01$  level for alexithymia. Considering that the mean alexithymia score of the experimental group at the posttest stage was lower than that of the control group, this difference also favors the experimental group. This finding suggests that Ellis's Rational Emotive Behavior Therapy was effective in reducing alexithymia among single undergraduate female psychology students at Islamic Azad University, Khomeini Shahr Branch, at the posttest stage.

#### 4. Discussion

The present study examined the effectiveness of Ellis's Rational Emotive Behavior Therapy (REBT) in reducing perceived stress and alexithymia among single undergraduate female psychology students. The findings demonstrated that participants who received REBT showed a significant reduction in perceived stress at the posttest stage compared with the control group. This result is theoretically consistent with the core assumptions of REBT, which emphasize that psychological distress is largely maintained by irrational beliefs and maladaptive cognitive appraisals rather than by external events themselves (Ellis, 2013). By systematically disputing irrational beliefs and replacing them with more rational, flexible, and reality-based cognitions, REBT appears to reduce students' tendency to appraise academic and interpersonal demands as

overwhelming or uncontrollable, thereby lowering perceived stress.

The reduction in perceived stress observed in the experimental group aligns closely with recent empirical studies highlighting the central role of cognitive-emotional processes in stress experiences among students. For example, Cao et al. reported that perceived stress among nursing students was strongly associated with maladaptive emotional patterns and academic difficulties, underscoring the importance of interventions that target both cognitive appraisals and emotional responses (Cao et al., 2025). Similarly, Zhang demonstrated that perceived stress plays a moderating role in psychological well-being, suggesting that interventions capable of reducing stress appraisal may have broad mental health benefits (Zhang, 2025). The current findings extend this literature by providing experimental evidence that REBT can effectively reduce perceived stress in a university student population.

In addition to perceived stress, the results indicated a significant decrease in alexithymia among students who participated in the REBT intervention. This finding is particularly noteworthy, as alexithymia has traditionally been considered a relatively stable personality trait. However, growing evidence suggests that alexithymia is, at least partially, amenable to change through targeted psychological interventions that enhance emotional awareness and cognitive-emotional integration (Sun et al., 2024; Xu et al., 2025). REBT's explicit focus on identifying emotions, linking emotions to beliefs, and encouraging emotional expression may directly address the core components of alexithymia, including difficulty identifying and describing feelings.

The observed reduction in alexithymia is consistent with studies demonstrating that emotional processing deficits are closely intertwined with maladaptive belief systems and ineffective coping strategies. Hu et al. found that alexithymia

mediated the relationship between childhood emotional abuse and suicidal ideation, highlighting the role of emotional unawareness in amplifying psychological distress (Hu et al., 2025). Similarly, Liu et al. reported that different dimensions of alexithymia moderated the association between psychological abuse and depression, suggesting that improving emotional awareness could buffer against negative mental health outcomes (X. Liu et al., 2024). The current findings suggest that REBT may serve as an effective intervention for weakening these maladaptive emotional mechanisms by fostering greater emotional clarity and cognitive flexibility.

The effectiveness of REBT in reducing both perceived stress and alexithymia can also be understood within a broader self-regulation framework. Research has shown that perceived stress and emotional dysfunction are reciprocally related, with higher stress levels impairing self-efficacy and emotional regulation, and emotional deficits, in turn, intensifying stress perception (Y. Liu et al., 2024). By targeting irrational beliefs and promoting adaptive coping strategies, REBT may disrupt this bidirectional cycle, leading to simultaneous improvements in stress appraisal and emotional processing. This interpretation is consistent with findings by Mafi et al., who emphasized the role of emotional intelligence and alexithymia in shaping academic outcomes among university students (Mafi et al., 2025).

Although nomophobia was not the primary outcome of the present discussion, the findings have important implications for technology-related stress and anxiety. Previous studies have demonstrated that nomophobia is closely associated with perceived stress and alexithymia, particularly among young adults who rely heavily on smartphones for emotional regulation and social connection (G & Y, 2022; Tams et al., 2018). Han et al. further showed that alexithymia significantly predicts nomophobia, with mindfulness and self-efficacy acting as mediating variables (Han et al., 2025). By reducing alexithymia and perceived stress, REBT may indirectly contribute to healthier technology use patterns, although this hypothesis requires direct empirical testing.

The present findings are also consistent with prior intervention studies demonstrating the efficacy of REBT in educational and academic contexts. Onuigbo et al. reported that REBT significantly improved stress management and reduced irrational beliefs among teachers, emphasizing its applicability in high-demand educational environments (Onuigbo et al., 2018). More recently, Elvins et al. found that REBT-based interventions enhanced mental health and

motivation regulation in student-athletes, further supporting the generalizability of REBT across student populations (Elvins et al., 2025). The current study extends these findings by demonstrating that REBT is effective not only in reducing stress but also in improving emotional awareness among female psychology students.

Cultural and contextual factors may also play a role in explaining the observed effects. Cross-sectional and comparative studies suggest that students' stress levels and emotional functioning are influenced by educational systems, cultural norms, and lifestyle factors (Marendić et al., 2024). Moreover, research conducted in different cultural contexts has highlighted variations in emotional expression and stress appraisal, underscoring the need for culturally sensitive interventions (Wen et al., 2024). The effectiveness of REBT in the present context suggests that its core principles—rational thinking, emotional awareness, and behavioral practice—are adaptable across cultural settings, although further cross-cultural comparisons are warranted.

## 5. Conclusion

Overall, the findings of this study provide empirical support for the use of Ellis's Rational Emotive Behavior Therapy as an effective intervention for reducing perceived stress and alexithymia among single undergraduate female psychology students. By addressing irrational beliefs and enhancing emotional processing, REBT appears to target key psychological mechanisms underlying stress and emotional dysfunction. These results contribute to the growing body of literature emphasizing the importance of integrated cognitive-emotional interventions in university mental health settings and offer practical implications for student counseling and psychological services.

Despite its contributions, the present study has several limitations that should be considered when interpreting the findings. First, the sample size was relatively small and limited to single undergraduate female psychology students from a single university, which restricts the generalizability of the results to other student populations, genders, academic disciplines, and cultural contexts. Second, the use of self-report questionnaires may have introduced response biases, such as social desirability or inaccurate self-assessment of emotional states. Third, the absence of a follow-up assessment limits conclusions regarding the long-term sustainability of the intervention effects. Finally, although the quasi-experimental design allowed for controlled

comparisons, randomization at a broader population level was not possible, which may limit causal inferences.

Future studies should replicate the present findings using larger and more diverse samples, including male students, married students, and individuals from different academic fields and cultural backgrounds. Longitudinal designs with follow-up assessments are recommended to examine the durability of REBT effects on perceived stress and alexithymia over time. Additionally, future research could incorporate multiple intervention groups to compare REBT with other evidence-based therapies, such as mindfulness-based or emotion-focused interventions. Exploring potential mediators and moderators, such as emotional intelligence, self-efficacy, and technology use patterns, would further clarify the mechanisms through which REBT exerts its effects.

From a practical perspective, university counseling centers and student support services may consider integrating REBT-based programs into their mental health interventions to address stress and emotional processing difficulties among students. Training workshops and group-based REBT interventions could be implemented to enhance students' rational thinking, emotional awareness, and adaptive coping skills. Incorporating REBT principles into academic skills training and psychoeducational programs may also help students manage academic pressures more effectively. Finally, given the growing prevalence of emotional dysregulation and stress in higher education, preventive REBT-based programs could be offered early in students' academic careers to promote psychological resilience and well-being.

### Authors' Contributions

M.A.F. was responsible for the conceptualization of the study, formulation of the research objectives, and selection of the theoretical framework based on Rational Emotive Behavior Therapy. F.N. designed the methodology, supervised participant recruitment and data collection, and conducted the statistical analyses. Both authors collaboratively interpreted the findings, contributed to writing the discussion and conclusion sections, critically reviewed the manuscript for scholarly rigor, approved the final version, and share full responsibility for the accuracy and integrity of the study.

### Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

### Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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### Declaration of Interest

The authors report no conflict of interest.

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### Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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