



# The Effectiveness of Acceptance and Commitment Therapy on Social Anxiety, Academic Performance, and Homesickness among International Students at Imam Khomeini International University

Somayeh. Keshavarz<sup>1\*</sup>

<sup>1</sup> Department of Psychology, Faculty of Social Science, Imam Khomeini International University, Qazvin, Iran

\* Corresponding author email address: s.keshavarz@soc.ikiu.ac.ir

## Article Info

### Article type:

*Original Research*

### How to cite this article:

Keshavarz, S. (2025). The Effectiveness of Acceptance and Commitment Therapy on Social Anxiety, Academic Performance, and Homesickness among International Students at Imam Khomeini International University. *Health Nexus*, 3(3), 1-8.

<https://doi.org/10.61838/kman.hn.3.3.15>



© 2025 the authors. Published by KMAN Publication Inc. (KMANPUB), Ontario, Canada. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License.

## ABSTRACT

The present study aimed to investigate the effectiveness of Acceptance and Commitment Therapy (ACT) in reducing social anxiety, improving academic performance, and alleviating homesickness among students. This research employed a quasi-experimental design with pre-test and post-test and a control group. The statistical population consisted of students at Imam Khomeini International University. Using purposive sampling, 30 students with high levels of social anxiety and homesickness were selected and randomly assigned to experimental and control groups. The experimental group received ACT-based intervention in eight 90-minute sessions, while the control group did not receive any intervention. The findings, analyzed using analysis of covariance, indicated that Acceptance and Commitment Therapy significantly reduced social anxiety and homesickness and improved the academic performance of students in the experimental group compared to the control group ( $p < 0.05$ ). The results of this study demonstrate the efficacy of the Acceptance and Commitment Therapy approach in enhancing students' mental health and academic adjustment, particularly in facing the psychological challenges of university life. Accordingly, the use of ACT is recommended as an effective intervention in student counseling centers.

**Keywords:** *Acceptance and commitment therapy, Social Anxiety, Academic Performance, Homesickness*

## 1. Introduction

The student period is one of the important stages of life, accompanied by numerous challenges. Entering university brings significant changes in an individual's personal and social life, exposing the person to a new environment and fresh social relationships. Being placed in this environment and confronting new expectations and roles is often accompanied by pressure and anxiety. In fact, during this period, students face various psychological problems,

including social anxiety, academic performance decline, and feelings of alienation, which can affect their mental health (1). Among these, international students often encounter greater adaptation challenges due to difficulties in adjusting to a new culture and language. Cultural differences between the home culture and the host culture are considered a significant factor, such that greater differences lead to more adaptation difficulties. Adapting to new social and educational environments can be a stressful experience,

which may manifest as communication problems, anxiety, feelings of loneliness, and decreased academic performance (2, 3). The social anxiety experienced by international students may ultimately lead to poor academic performance, withdrawal, or dropout (4).

Social anxiety is characterized as a psychological disorder involving intense fear and avoidance of social situations, often driven by concerns about judgment, embarrassment, or rejection by others. This increases social distress, creating a vicious cycle that repeats continuously. Individuals attempt to engage in safety behaviors—actions aimed at avoiding or reducing a perceived threat—but these behaviors are ineffective and lead to further psychological problems (5). People with high social anxiety suffer from attending social situations and fear speaking in front of others or become extremely anxious when speaking, which causes their speech to appear vague and incoherent. This can harm academic achievements and disrupt academic functioning (6).

Academic performance refers to the success of a student in passing various courses and demonstrating appropriate functioning in society and life based on the learned material (7). Research indicates that high academic performance can lead to increased self-efficacy, reduced behavioral problems, and improved adaptation (8). The adaptation of international students to new academic challenges and standards is a critical issue among university administrators and academic advisors because it significantly affects students' academic performance. Although entering university is an opportunity for personal growth, international students face multiple challenges, including managing independent living, forming new friendships, and adjusting to new academic standards. During the adaptation process, these students often feel alienated due to the sudden transition from familiar environments to a culturally different context, which can adversely affect their academic success (9).

Feelings of alienation and separation from family and familiar environments represent another challenge faced by many students. Alienation is a broad term encompassing fear of the unknown and feelings of loneliness. Studying in a different country can be an excellent opportunity for personal growth; however, it is a major change that may involve many adjustments such as living alone in a new culture, making new friends, becoming familiar with the

university environment, and adapting to situations and lifestyles without parental presence (10). Alienation manifests through a set of symptoms including physical signs such as headaches, loss of appetite, and sleep disturbances; motivational signs like eagerness to return home; cognitive signs such as inability to concentrate and negative evaluations of the surrounding environment; emotional signs related to mood and anxiety disorders; and behavioral signs such as maintaining contact with family and friends. Studies have found significant relationships between alienation, cognitive failures, reduced concentration, lower work quality, poorer academic performance, and higher levels of anxiety and depression (10, 11). In recent years, Acceptance and Commitment Therapy (ACT) has emerged as an effective approach to address psychological problems and help clients achieve a more valuable and satisfying life (12).

This therapeutic approach assists individuals in accepting difficult thoughts and feelings while committing to valued actions. ACT consists of six core processes that lead to psychological flexibility: acceptance, cognitive defusion, contact with the present moment, self-as-context, values, and committed action (12). Numerous studies have demonstrated the effectiveness of ACT in reducing social anxiety symptoms. It has been shown that group ACT training can improve students' mental health and increase their psychological flexibility and mindfulness (13). Additionally, results from a multivariate covariance analysis in another study indicated that ACT significantly reduced external shame, social anxiety, and difficulties in emotion regulation, while increasing psychological flexibility and self-compassion at post-test and follow-up (14). Moreover, research showed that ACT positively influences emotion regulation, academic adjustment, motivation, and life satisfaction among students (15, 16).

In fact, this therapeutic approach adopts a transdiagnostic perspective, positing that psychological, familial, academic, and other problems stem from deficits in psychological capacities such as psychological flexibility. By cultivating mindfulness, self-compassion, and committed action, ACT helps individuals confront their fears, reduce avoidance, and improve their quality of life. Targeting the core components of psychological flexibility (acceptance, cognitive defusion, values, goals, mindfulness, and committed action), ACT can

enhance students' personal well-being, which in turn strengthens their academic motivation and emotional, social, and educational adaptation. ACT promotes acceptance of anxiety-provoking thoughts and feelings instead of avoidance, thereby increasing distress tolerance, self-compassion, and emotion regulation (17). This therapy reduces experiential avoidance and enhances acceptance, enabling students to cope more effectively with difficult emotions and social situations, ultimately decreasing social anxiety and feelings of alienation and improving academic performance. However, only a few studies have examined the effectiveness of ACT-based interventions among international students. Therefore, considering the importance of the issue, the present study aims to investigate the effectiveness of Acceptance and Commitment Therapy on social anxiety, academic performance, and feelings of alienation among students.

## 2. Methods and Materials

### 2.1. Study Design and Participants

The present study employed a quasi-experimental design with a pretest-post test and control group to examine the effectiveness of Acceptance and Commitment Therapy (ACT) on social anxiety, academic performance, and homesickness among international students at Imam Khomeini International University. The statistical population consisted of international students at Imam Khomeini International University during the academic year 2024-2025. From this population, 30 students were selected through purposive sampling and randomly assigned into two groups: experimental ( $n = 15$ ) and control ( $n = 15$ ). Inclusion criteria for the study consisted of being interested in research, students who have completed at least one semester and no acute or chronic physical illnesses and exclusion criteria from the study included of expressing dissatisfaction and withdrawing from participation at any stage of the study and unfilled or incomplete questionnaires. The experimental group underwent eight 90-minute sessions of group-based ACT, while the control group received no therapeutic intervention. The eight-session ACT intervention was based on the implementation protocol developed by Hayes, Strosahl, Bunting, Twohig, and Wilson (2010).

Data will also be collected using questionnaires on social anxiety, feelings of alienation, and academic performance.

### 2.2. Data Collection Tools

**Social anxiety Questionnaire:** The Social Anxiety Questionnaire was developed by Jerabek (1996) to diagnose social anxiety. This instrument consists of 25 items with a 5-point Likert scale: Always, Almost Always, Often, Rarely, and Almost Never. It includes five subscales: fear of strangers, fear of evaluation by others, fear of speaking in public, fear of social isolation, and fear of revealing anxiety symptoms and each subscale consists five questions. The reliability of this questionnaire in Iran on a sample of 477 students showed a Cronbach's alpha coefficient of 0.76 (18). In the present study, the reliability coefficient of this questionnaire was 0.79.

**Homesickness Questionnaire:** The homesickness Questionnaire consists of 45 items and includes five factors: homesickness for family, desire to return to hometown, adaptation, feelings of loneliness, and longing for familiar people and environment. The items are scored on a five-point Likert scale, where respondents select one of the following options: Never, A little, Moderate, Much, and Very Much, corresponding to scores of 1, 2, 3, 4, and 5, respectively. The Cronbach's alpha coefficients for the subscales were reported as 0.90, 0.89, 0.85, 0.84, and 0.69, respectively (16). In the present study, the reliability coefficients for the subscales were 0.88, 0.79, 0.80, 0.81, and 0.71, respectively.

**Academic Performance Questionnaire:** The Academic Performance Questionnaire was developed by Pham and Taylor (1999). It consists of 48 items measuring five dimensions (19): self-efficacy, planning, emotional effects, lack of outcome control, and motivation. Each item is scored on a 5-point scale with response options: None, Low, Moderate, High, and Very High. Some items are reverse-scored. The maximum possible score is 240, and the minimum is 48 (19). The reliability of this test was estimated using construct validity through factor analysis, with the obtained factor loadings as follows: self-efficacy 0.97, emotional effects 0.93, planning 0.73, lack of control 0.64, and motivation 0.72 (21). In the present study the reliability coefficients based on Cronbach's alpha were 0.85 for self-

efficacy, 0.91 for emotional effects, 0.78 for planning, 0.72 for lack of control, and 0.83 for motivation.

### 2.3. Intervention

The intervention protocol based on Acceptance and Commitment Therapy (ACT) consisted of eight structured group sessions designed to enhance psychological flexibility. The first session focused on group introduction, establishing a therapeutic alliance, clarifying treatment goals, and initiating the concept of creative hopelessness to challenge ineffective control strategies. The second session continued the theme of creative hopelessness with performance assessment and introduced the idea of control as a problem. In the third session, participants explored the distinction between internal and external experiences, identified personal values, and examined obstacles that hinder valued action. The fourth session emphasized the review of personal values using experiential metaphors to deepen insight. The fifth session introduced the concepts of cognitive fusion and defusion, engaging participants in defusion exercises through metaphorical tools. Session six covered the notion of self-as-context, encouraging perspective-taking and observation of thoughts and feelings from a more detached stance. The seventh session centered on cultivating present-moment awareness as a core mindfulness process. Finally, the eighth session taught strategies for committed action, helping participants identify behavioral patterns consistent with their values and integrate these into a coherent life narrative.

### 2.4. Data Analysis

Data analysis in this study was conducted using SPSS version 26. Descriptive statistics (mean, standard deviation, skewness, and kurtosis) were calculated to assess the distribution of the data. To evaluate the effectiveness of Acceptance and Commitment Therapy (ACT), assumptions for parametric testing—including the homogeneity of variances (via Levene's test) and the homogeneity of regression slopes—were verified. Subsequently, analysis of covariance (ANCOVA) was employed to compare post-test scores of social anxiety, homesickness, and academic performance between the experimental and control groups while controlling for pre-test scores.

## 3. Findings and Results

The mean age and standard deviation of the experimental group were  $21.44 \pm 3.12$ , and for the control group, they were  $22.02 \pm 3.42$ . Table 1 presents the means and standard deviations of the research variables separately for the two groups at the pretest and posttest stages. As observed in the table, the mean scores of social anxiety, homesickness, and academic performance in the experimental group changed at the posttest stage, whereas the mean scores of the control group showed no significant change. These results indicate that Acceptance and Commitment Therapy was effective in reducing social anxiety and homesickness and improving academic performance among international students. Additionally, skewness and kurtosis values of the variables suggest that the research data follow a normal distribution.

**Table 1**

*Descriptive statistics of research variables by Groups*

Variable	Group	Stage	Mean	SD	Skewness	Kurtosis
Social Anxiety	Experimental	Pretest	74/79	10/12	-0.08	0.44
		Posttest	67.39	9.52	-0.63	-0.37
	Control	Pretest	73/94	10/25	-0.77	0.07
		Posttest	74/11	9.98	-0.60	0.33
Homesickness	Experimental	Pretest	94/22	13.90	0.22	-0/19
		Posttest	86/38	12/55	-0.81	-0/03
	Control	Pretest	93/08	13.34	-0.11	0.45
		Posttest	94/12	13.39	0/28	-0/43
Academic Performance	Experimental	Pretest	126/37	24/55	0.04	-0/79
		Posttest	136/23	25/60	-0.15	-1/13
	Control	Pretest	127.12	25/64	0.28	-1.33
		Posttest	127.90	24/61	-1/24	0.85

To examine the effectiveness of Acceptance and Commitment Therapy (ACT) on social anxiety, homesickness, and academic performance among international students, analysis of covariance (ANCOVA) was employed. Prior to conducting ANCOVA, the

assumptions of this test were evaluated. The assessment of the homogeneity of variances using Levene's test indicated that this assumption was met for the research variables. The results of this test are presented in [Table 2](#).

**Table 2**

*Results of Levene's test for the assumption of homogeneity of variances between the two groups*

Variable	F	df1	df2	p-value
Social Anxiety	0.96	1	28	0.335
Homesickness	0.15	1	28	0.702
Academic Performance	2.13	1	28	0.155

As shown in the above table, Levene's test was not significant for any of the variables, indicating that the assumption of homogeneity of variances between groups has

been met. Another important assumption of analysis of covariance is the homogeneity of regression slopes, the results of which are presented in [Table 3](#).

**Table 3**

*Test of homogeneity of regression slopes for research variables*

Variable	F	df	p-value
Social Anxiety	2.80	2	0.082
Homesickness	0.62	2	0.543
Academic Performance	1.81	2	0.191

According to the results presented in [Table 3](#), the significance level (p-value) of the F statistic for all variables

is greater than 0.05. Therefore, the assumption of homogeneity of regression slopes has been met.

**Table 4**

*Results of univariate analysis of covariance (ANCOVA) for research variables at the post test stage*

Source	Dependent Variable	Sum of Squares	df	Mean Square	F	p-value	Eta Squared
Pretest	Social Anxiety	78.076	1	78.076	32.605	0.001	0.594
Group		412.055	1	412.055	119.60	0.001	0.779
Error		31.344	27	1.160			
Total		85630.906	30				
Pretest	Homesickness	12.654	1	12.654	13.221	0.123	0.073
Group		526.191	1	526.191	134.15	0.001	0.813
Error		35.260	27	5.107			
Total		90046.780	30				
Pretest	Academic Performance	7.550	1	7.550	2.036	0.168	0.094
Group		698.054	1	698.054	157.321	0.001	0.853
Error		73.233	27	2.712			
Total		129982.003	30				

Based on the above results, the F statistic for social anxiety is 119.60, which is statistically significant and indicates a significant difference between the two groups on this variable. Additionally, the effect size in [Table 4](#) shows that group membership explains 77.9% of the variance in

social anxiety. The F statistic for Homesickness is 134.15, which is also statistically significant, indicating a significant difference between the two groups on this variable; the effect size demonstrates that group membership accounts for 81.3% of the variance in Homesickness. Furthermore, the F



statistic for academic performance is 157.321, which is statistically significant, indicating a significant difference between the two groups in this variable as well. The effect size shows that group membership explains 85.3% of the variance in academic performance. These findings indicate that Acceptance and Commitment Therapy (ACT) led to a reduction in social anxiety and Homesickness, and an increase in academic performance among international students at Imam Khomeini International University in Qazvin.

#### 4. Discussion and Conclusion

The findings of the present study showed that Acceptance and Commitment Therapy (ACT) significantly reduced social anxiety and Homesickness, and improved academic performance among international students at Imam Khomeini International University. These results are consistent with previous studies (5, 9, 11, 13, 14, 20), which have confirmed the effectiveness of ACT in reducing symptoms of social anxiety and Homesickness, as well as enhancing academic performance. These studies have shown that ACT reduces self-blame and catastrophic rumination, ultimately leading to reduced social anxiety, which can help individuals better cope with academic social situations and benefit from educational and communication opportunities.

In ACT, interventions related to cognitive defusion involve exercises that break the literal meaning of internal events. The goal of these exercises is to teach clients to see thoughts as just thoughts, feelings as just feelings, memories as just memories, and bodily sensations as just bodily sensations. None of these internal events, when experienced, are inherently harmful to health; they become problematic and unhealthy only when they are perceived as absolute truths that must be controlled or eliminated (13, 20). ACT techniques place significant emphasis on reducing cognitive fusion. When cognitive fusion is reduced, cognitive defusion occurs, meaning the individual is separated from the content of their thoughts and can view a thought as just a thought (acceptance), not as a fact, and thus does not act according to it (defusion). Therefore, in explaining the hypotheses of this study, it can be noted that the strategy of ACT for negative internal experiences such as social anxiety and homesickness is not to eliminate or avoid these experiences. Rather, this therapeutic approach emphasizes fully

experiencing and accepting negative emotions instead of suppressing them. This intervention enables individuals to move toward their personal values despite negative emotions, without suppressing them. In fact, the components of ACT-based interventions, by changing individuals' attitudes and values and promoting acceptance of current circumstances, foster personal responsibility and improve academic performance among international students.

ACT-based interventions can be effective in enhancing the well-being of international students. These interventions can provide international students with tools and skills to increase their psychological flexibility—that is, the ability to cope with stressful or unpleasant thoughts and feelings and act in line with value-based goals. Increased psychological flexibility can help international students effectively cope with the unique challenges they face. This process helps students perform better and maintain their mental health when confronted with academic and social stressors and challenges. Furthermore, ACT-based interventions can have a positive impact on overall health and well-being.

The limitations of the present study include a relatively small sample size and the focus on a single university, which may limit the generalizability of the results. Additionally, the use of self-report instruments may have been influenced by socially desirable responses. Future research could enhance the validity of the findings by using larger and more diverse samples and employing multi-method assessment approaches. Ultimately, the findings of this study emphasize that ACT can be used as a comprehensive and effective approach for reducing social anxiety, improving academic performance, and decreasing homesickness in international students. By focusing on the acceptance of internal experiences and commitment to values, this approach helps students better cope with their psychological and academic challenges, thereby improving their quality of life and academic success.

Therefore, it is recommended that universities and counseling centers design and implement special support programs for international students based on ACT, to reduce psychological problems and facilitate their academic progress and better adaptation to the university environment. Additionally, specialized training for university counselors and psychologists in ACT can enhance the effectiveness of these interventions. Overall, this study contributes to the

scientific knowledge regarding the application of modern psychological therapies in academic settings and demonstrates that ACT can play an important role in improving the mental health and academic performance of international students. These findings can serve as a basis for future research and the development of intervention programs in the field of student mental health.

### Authors' Contributions

The sole author was responsible for all aspects of this research, including the conceptualization and design of the study, data collection, statistical analysis, interpretation of results, and preparation of the manuscript. The author also conducted the literature review, drafted and revised the article, and approved the final version for submission. All research activities and writing were performed independently by the author.

### 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.

### Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

### Declaration of Interest

The authors report no conflict of interest.

### Funding

This article is derived from an internal project supported by Imam Khomeini International University.

### Ethics Considerations

The study placed a high emphasis on ethical considerations. Informed consent obtained from all participants, ensuring they are fully aware of the nature of the study and their role in it. Confidentiality strictly

maintained, with data anonymized to protect individual privacy. The study adhered to the ethical guidelines for research with human subjects as outlined in the Declaration of Helsinki.

### References

1. Javaheri M, Navidi-Moghadam M. Effectiveness of Acceptance and Commitment Therapy on Social Anxiety and Family Communication Pattern in university students of Qom city. *Journal of Social Health*. 2024;11(1):20-30. [DOI]
2. Brandolin F, Lappalainen P, Gorinelli S, Muotka J, Räsänen P, Lappalainen R. The effectiveness of a five-session workshop on the distress of international students in Finland-a pilot study. *British Journal of Guidance & Counselling*. 2023;51(6):865-82. [DOI]
3. Shadowen NL, Williamson AA, Guerra NG, Ammigan R, Drexler ML. Prevalence and correlates of depressive symptoms among international students: Implications for university support offices. *Journal of International Students*. 2019;9(1):130-49. [DOI]
4. Forbes-Mewett H, Sawyer AM. International students and mental health. *Journal of International Students*. 2016;6(3):661-77. [DOI]
5. Deng X, Xiaomin C, Zhang L, Gao Q, Li X, An S. Adolescent social anxiety undermines adolescent-parent interbrain synchrony during emotional processing: A hyper scanning study. *International Journal of Clinical and Health Psychology*. 2022;22(3):100329. [PMID: 36111264] [PMCID: PMC9449656] [DOI]
6. Xin S, Sheng L. Changes of social anxiety in Chinese adolescents during 2002 -2020: An increasing trend and its relationship with social change. *Children and Youth Services Review*. 2022;116(11):105-59. [DOI]
7. Rezapour Mirsaleh R, Ahmadi Ardakani Z, Shiri M. The effectiveness of acceptance and commitment based treatment on the academic performance of veteran children. *Veterans Engineering and Medical Sciences Research Institute*. 2017;10(1):33-9. [DOI]
8. Jury M, Smeding A, Court M, Darnon C. When first generation students succeed at university: On the link between social class, academic performance, and performance avoidance goals. *Contemporary Educational Psychology*. 2015;41:25-36. [DOI]
9. Sun J, Hagedorn LS, Zhang Y. Homesickness at college: its impact on academic performance and retention. *Journal of College Student Development*. 2016;57(8):943-57. [DOI]
10. Bardelle C, Lashley C. Pining for home: Studying crew homesickness aboard a cruise liner. *Research in Hospitality Management*. 2015;5(2):207-14. [DOI]
11. Saravanan C, Alias A, Mohamad M. The effects of brief individual cognitive behavioural therapy for depression and homesickness among international students in Malaysia. *Journal of Affective Disorders*. 2017;220:108-16. [PMID: 28618312] [DOI]
12. Hayes SC, Strosahl KD. A practical guide to acceptance and commitment therapy: New York: Springer Press; 2010.
13. Christodoulou F, Flaxman PE, Lloyd J. Acceptance and commitment therapy in group format for college students. *Journal of College Counseling*. 2021;24(3):210-23. [DOI]
14. Sharif Ara B, Khosropour F, Molayi Zarandi H. Effectiveness of Acceptance and Commitment Therapy (ACT) on Emotional Processing, Irrational Beliefs and Rumination in Patients with Generalized Anxiety Disorder. *Journal of Adolescent and Youth Psychological Studies*. 2023;4(4):34-44. [DOI]

15. Chegeni S, Karimi J, Vajdian MR. The Effectiveness of Acceptance and Commitment Therapy (ACT) on Academic Buoyancy and Psychological Capital of Female Students with Low Academic Performance. *Journal of Health Promotion Management*. 2025;13(5):41-52. [DOI]
16. Valizade M, Manshaee GH, Kareshki H. Effectiveness of acceptance and commitment group therapy on the symptoms of homesickness, anxiety and emotional regulation in college students. *Journal of Research in Clinical Psychology and Counseling*. 2022;8(2):43-60. [DOI]
17. Levin ME, MacLane C, Dafflos S, Seeley JR, Hayes SC, Biglan A, et al. Examining psychological inflexibility as a transdiagnostic process across psychological disorders. *Journal of Contextual Behavioral Science*. 2014;3(3):155-63. [PMID: 29057212] [PMCID: PMC5650239] [DOI]
18. Sam Daliri S. A study on the Validity and Reliability of the Social Anxiety Questionnaire by Jarabek: Master's Thesis, Allameh Tabatabai University; 2002.
19. Pham LB, Taylor SE. From Thought to Action: Effects of Process- Versus Outcome-Based Mental Simulations on Performance. *Society for Personality and Social Psychology*. 1999;25(2):250-60. [DOI]
20. Yazdani Baghmaleki A, Mehri M, Elahi Najaf Abadi S. Evaluation of the effectiveness of acceptance and commitment-based therapy on academic performance and exam anxiety of female high school students. *Journal of New Approach to Children's Education*. 2022;4(2):40-8. [DOI]