



The Effects of Resilience Training on Mental Health Among Students

Mohadese Talaie ¹, Yahya Mohammadi ² and Mohammadreza Raeisoon ^{3,*}

¹Elementary Teacher, Khorasan Jenoubi, Ferdows, Iran

²Education Development Center, Birjand University of Medical Sciences, Birjand, Iran

³Department of Community Medicine, School of Medicine, Birjand University of Medical Sciences, Birjand, Iran

*Corresponding author: Cardiovascular Research Center, Birjand University of Medical Sciences, Birjand, Iran. Email: raeisoon49@gmail.com

Received 2023 December 23; Revised 2024 February 12; Accepted 2024 February 17.

Abstract

Background: Research indicates that certain demographic groups, including girls, often experience lower-than-average levels of mental well-being. Therefore, it appears that one approach to enhancing mental health is by teaching resilience skills.

Objectives: This study aimed to investigate the effects of resilience training on the mental health dimensions of sixth-grade female students in Qaynat city during the academic year 2021 - 2022.

Methods: The study employed an experimental design with a control group, conducting pre- and post-tests. The statistical population comprised female sixth-grade students from an elementary school in Qaynat City. Thirty female students exhibiting high scores on measures of depression, anxiety, and stress were selected and randomly divided into two experimental groups, with 15 participants in each group. The experimental group underwent resilience training consisting of 8 sessions. The desired variables were measured using Lovibond and Lovibond's Depression, Anxiety, and Stress Scale (DASS). The data were analyzed using SPSS 25 software through independent samples t-tests and paired t-tests.

Results: The findings revealed that the resilience training intervention significantly reduced symptoms of depression ($F = 11.542$), anxiety ($F = 13.67$), and stress ($F = 6.01$) in the experimental group ($P = 0.001$).

Conclusions: The results suggest that participation in a resilience training program can improve students' mental health. Therefore, implementing such intervention programs in the form of workshops and establishing counseling and support groups may be beneficial for enhancing students' mental well-being.

Keywords: Stress, Depression, Anxiety, Resilience, Mental Health

1. Background

Mental disorders affect nearly 20% of children and adolescents worldwide and are linked to discrimination, social injustice, poor educational outcomes, chronic diseases, and traumatic behaviors (1, 2). Moreover, the onset of most mental disorders in adults have been revealed at the age of 14, and occurs during adolescence, which is recognized as the most vulnerable period for such conditions (3). Neglecting mental health promotion in schools can complicate any changes, decisions, or treatment plans since a child's school years are critical and have the potential to impact their academic success and mental health in adulthood (4). Stress, anxiety, and depression are among the most prevalent mental and emotional issues faced by students (5). Various environmental and situational factors play a role in individuals' mental health experiences (6, 7). The level of stress experienced can be influenced by changes in life

circumstances, as well as environmental conditions such as uncertainty about roles or positions, desirability of situations, and perceived control over them (8).

Due to their unique circumstances and social status, female students are particularly vulnerable to numerous disorders, including depression, anxiety, and physical complaints (9, 10). This demographic often exhibits higher levels of vulnerability and struggles to adapt to challenging conditions, leading to various problems (11). Research by Mohammadbeygi et al. indicated that being female increases the likelihood of experiencing mental illnesses by up to four times (12). Anxiety disorders are twice as common in women compared to men (13). Therefore, to support students' mental health, it is essential to identify effective factors and address both positive and negative influences (14, 15).

One of the most crucial non-pharmaceutical factors influencing health is education aimed at empowering

students to build resilience (16, 17). Resilient individuals can effectively adapt to challenging conditions, demonstrating a positive response to adversity (18). Resilience addresses whether a person can enhance their social skills and overcome challenges, even in the face of extreme pressure and risk factors (19). Possessing resilience enables students to exhibit adaptive behavior in problem-solving situations, making it easier for them to address challenges and reducing their susceptibility to mental health issues (20, 21). Students' success in both academic and life situations can be attributed to their resilience within the educational environment despite environmental challenges (22).

Steensma et al. concluded in their research that resilience training can enhance the use of effective coping strategies, such as active problem-solving, seeking social support, self-encouragement, and maintaining positive thoughts, while reducing reliance on ineffective coping strategies like depressive reactions, passivity, and avoidance (23). Similarly, in another study, Steinhardt and Dolbier observed that resilience training improves protective factors such as positive emotions, self-confidence, and self-leadership while decreasing negative emotions, stress, and depression (24).

Despite searches conducted in domestic databases, no research has explored the effectiveness of resilience education on mental health dimensions in non-clinical populations, particularly among female students.

2. Objectives

The present study aimed to investigate the impact of resilience training on mental health aspects (stress, depression, anxiety) among sixth-grade female students in Qain City.

3. Methods

3.1. Study Design

The research was conducted using an experimental method employing a pre-test-post-test design with a control group. Sixth-grade female students from Qaynat City in the academic year 2022 - 2023 were eligible to participate in the study.

3.2. Participants

From the entire sixth-grade female student population of Qaynat City in the academic year 2022 - 2023, 30 female students were selected based on randomized block designs and initial mental health examination scores (lower mental health scores). To accomplish this, two cards

were prepared, with either the number 1 or 2 written on each card. Number 1 represented the experimental group, while number 2 represented the control group. These cards were placed in a box and mixed, and then one card was randomly selected for each group by the researcher (the selected cards were not returned to the box after selection). Subsequently, the students were divided into study groups through random selection, resulting in 15 students allocated to the experimental group and 15 to the control group.

Based on Hosseini Ghomi and Jahanbakhshi study (25) and considering 80% power, 90% confidence limits, and average scores of 67.10 and 08.7, with standard deviations of 2.99 and 2.46, a sample size of 15 participants in each group was calculated.

3.3. Scales

After the orientation meeting and coordination with the school principal, teachers, and students, the questionnaire for both groups of students was completed. Subsequently, the intervention group received the necessary training based on the resilience training package. The training sessions were conducted according to the planned schedule, comprising 8 face-to-face sessions over two months, facilitated by a master's student in educational sciences specializing in elementary education (one session per week). Each training session lasted 90 minutes. Four weeks after the completion of the eighth session, the post-test questionnaire was administered to both groups. No specific training related to the research topic was provided to the control group during this period. Both groups were evaluated simultaneously. However, to adhere to research ethics, after the intervention was completed, all the training provided to the intervention group was also offered to the control group.

3.4. Data Collection

3.4.1. Depression, Anxiety, and Stress Scale (DASS-21)

In this study, the DASS-21, designed by Lovibond et al., was used to measure the desired variables of depression, anxiety, and stress. This questionnaire consists of 21 questions divided into three subscales, each comprising 7 questions. Participants rate each question based on its relevance to them, with responses ranging from zero (not applicable) to three (very relevant). The sum of scores from the related questions determines the final score for each subscale.

To ensure an accurate score, the final score should incorporate twice the number of subscales, as the DASS-21 is a shortened version of the main scale (42 questions). Scores for depression, anxiety, and stress range from 0 to

21. Mild classification is considered for scores of 6 - 8 for depression, 4 - 5 for anxiety, and 5 - 6 for stress, while severe classification is designated for scores exceeding 14 for depression, 10 for anxiety, and 17 for stress. Lovibond reported the validity of the DASS-21 as 0.77. Additionally, the reliability of the DASS-21 and its components, including depression (0.89), anxiety (0.84), stress (0.82), and overall completion (0.83), was assessed through Cronbach's alpha coefficient. In Iran, its reliability has been confirmed in various studies, such as those conducted by Sahebi et al. (26), Seyed Mahmoudi (27), Kordi and Banaei Heravan (28), and Rezaei Adriani et al. (29), with a correlation coefficient of 0.95.

3.4.2. Educational Content of Resilience Training Package

The educational program is based on Seligman's theory of positive psychology and comprises 8 sessions, as outlined in Table 1.

3.5. Data Analysis

For data analysis using SPSS version 25 software, descriptive statistical methods such as mean and standard deviation were first employed to describe the data, followed by independent *t*-test and paired *t*-test in the analytical phase.

3.6. Ethical Consideration

This study was approved by the Ethics Committee of Islamic Azad University, Birjand Branch, under the code IR.IAU.BIRJAND.REC.1402.023. Prior to commencing the study, all participants completed an informed consent form and were assured that their information would remain confidential and be published anonymously.

4. Results

Based on the selection of the study population, the two study groups were similar in demographic characteristics such as age (12 years old), gender (female), and education level (6th grade primary school). According to the study findings, the average scores of mental health and its components (depression, anxiety, and stress) before the intervention did not differ significantly between the two groups ($P = 0.230$).

The average score of depression in the intervention group decreased significantly by -2.27 ± 1.83 after the intervention, which was statistically significant ($P < 0.001$), whereas the control group did not show a statistically significant change ($P = 0.610$).

Similarly, in the intervention group, the average anxiety score significantly decreased by -3.13 ± 1.73 after the

intervention ($P < 0.001$), whereas in the control group, this change was not statistically significant ($P = 0.279$).

Furthermore, the average stress score in the intervention group decreased significantly by -2.6 ± 2.06 with statistical significance ($P < 0.001$), whereas in the control group, this change was not statistically significant ($P = 0.887$).

Overall, the average mental health score in the intervention group decreased significantly by -8.0 ± 3.48 ($P < 0.001$), while in the control group, this change was not statistically significant ($P = 0.869$).

Therefore, it can be concluded that resilience training has been effective in improving mental health and its components in sixth-grade female students of Qaynat City. More details are presented in Table 2.

5. Discussion

In this study, which examined the impact of resilience training on the mental health of sixth-grade female students, it was demonstrated that resilience enhances students' mental well-being by reducing anxiety, depression, and stress. These findings align with those of previous studies by Hosseini Ghomi and Jahanbakhshi (25), Tabatabaei and Chalabainloo (30), Jahed Motlagh et al. (31), Devi et al. (32), Horowitz et al. (33), Gillham et al. (34), Allen et al. (35), Vernon and Bernard (36), Yamamoto et al. (37), and Caldarella et al. (38). According to the findings of Hosseini Ghomi and Jahanbakhshi, mothers of children with mental disabilities can benefit from educational programs, counseling, and support groups as part of intervention programs to reduce stress and enhance their mental health (25). Jahed Motlagh et al. concluded that participation in resilience training programs can effectively reduce psychological pressure among students (31). Fava and Tomba (39) found that resilience programs can alleviate symptoms of anxiety, depression, adjustment disorders, and behavioral issues. Results from studies by Horowitz et al. (33), Gillham et al. (34), Allen (35), and Vernon and Bernard (36) indicate reductions in symptoms of depression, anxiety, feelings of helplessness, and automatic negative thoughts, along with increases in self-esteem and optimism.

Moreover, resilience training is deemed essential to boost self-efficacy and prevent social and psychological harm among primary school girls (40). Student stress may stem from cognitive errors and irrational beliefs (41). The resilience program's focus on challenging self-defeating thoughts, examining hypotheses about oneself, others, and the world, gathering evidence regarding core beliefs, and exploring alternative explanations proves effective in alleviating various emotions such as stress (42, 43).

Table 1. Educational Content of Resilience Training Package

Session	Aim	Activity	Homework
1	Familiarizing participants with each other and the instructor and explaining the basics of the educational program	Conducting the pre-test, reviewing the theoretical foundation of the resilience program, explaining the program's objectives and the concept of resilience, and addressing participants' questions and concerns	Compiling a list of problems and life challenges faced by the students and discussing strategies for coping with them
2	Teaching participants to understand the relationships in the ABC model	Assisting individuals in grasping the ABC model by creating various scenarios involving adverse events (A) and their resulting consequences (C), while focusing on the underlying beliefs associated with these outcomes	Recording instances where negative and unproductive beliefs led to destructive behaviors and emotions
3	Assessing the documented patterns of individuals facing adverse events	Discussing the significance of documenting individual characteristics when encountering different events, and exploring the three determining dimensions of stability/instability, generality/specificity, and internality/externality, and their relationship with the ABC model	According to the table of document styles: 1- Keeping a record of situations where a pessimistic mindset was employed and documenting the unfavorable outcomes based on the ABC pattern; 2- Evaluating pessimistic styles with an optimistic approach and documenting the behavioral and emotional consequences of these styles
4	Teaching how to debate and address catastrophic attitudes and beliefs	Teaching effective coping strategies for catastrophic beliefs by incorporating two additional factors into the ABC model: Conflict (D) represents the clash with false beliefs (B), and energization (E) denotes the level of energy generated by the resulting change in consequences	Encouraging individuals to pay attention to their inner dialogue when confronted with unpleasant events and to record coping strategies employed in facing them
5	Teaching the five steps of problem-solving skills	In this section, students learn that successful problem-solving involves five stages: (1) Pondering and contemplation, (2) considering alternate perspectives, (3) establishing goals, (4) selecting a course of action based on evaluating positive and negative outcomes, and 5) testing the effectiveness of the chosen solution	Students practice problem-solving skills in real-life scenarios and document their behavioral and emotional outcomes for themselves and others
6	Teaching social skills such as assertiveness and negotiation	In the segment focusing on assertiveness, emphasis is placed on assertively expressing one's viewpoints without aggression. However, interactions with others may challenge individuals' perceptions or reveal differing goals. In such instances, individuals are taught negotiation skills to reach mutually agreeable solutions	Students practice assertiveness and negotiation skills in various real-life scenarios, engaging in conversations and negotiations
7	Teaching resilience-in-the-moment skills	Instruction includes techniques such as proper breathing, relaxation, positive visualization, and managing intrusive thoughts to alleviate stress. While avoiding stress entirely may be impossible, students can employ techniques to help them remain calm and regain a relaxed state	Students are encouraged to incorporate relaxation exercises into their daily routines and to monitor and rate their stress levels regularly
8	Training in self-confidence and self-esteem, with ongoing review and post-test implementation	This session covers four types of self-confidence (real high, real low, false high, and false low) based on individual abilities and beliefs. Obstacles to self-belief are discussed, and techniques for enhancing self-confidence are introduced in four stages	Students practice these techniques in real-world settings, utilizing strategies to boost self-confidence and documenting their experiences in relation to the ABC pattern and optimistic documentation style, noting behavioral and emotional consequences

Furthermore, research has demonstrated a significant correlation between exam anxiety and emotion regulation, as well as psychological resilience in students (44). Hence, the development of a resilience education intervention may prove beneficial in supporting students experiencing anxiety during exams.

Considering one of the fundamental principles of meaning therapy, it emphasizes redirecting individuals' focus towards the realization that life's primary motivation and purpose lie not in avoiding pain and seeking pleasure but in discovering meaning, which

imbues life with genuine significance. Consequently, individuals willingly endure pain and suffering that possess meaning and purpose (45, 46). Positive emotions associated with the future encompass confidence, optimism, trust, hope, and faith. Research indicates that positive emotions counteract the impact of negative emotions on attention, creativity, and physiology. Individuals characterized by traits such as strong commitment, a sense of purpose in life, fulfilling relationships, mindfulness in daily activities, and the ability to harness their talents often experience a sense of

Table 2. Comparison of the Mean Depression, Anxiety, Stress, and Mental Health Scores in the Studied Groups Before and After the Intervention ^a

Parameter	Intervention Group	Control Group	P-Value ^b
Depression			
Pre-test	11.6 ± 2.95	9.87 ± 3.14	0.130
Post-test	9.33 ± 3.27	10.27 ± 3.27	0.440
P-value ^c	< 0.001	0.610	
Differences between the 2 times	-2.27 ± 1.83	0.4 ± 2.97	0.006
Anxiety			
Pre-test	11.8 ± 4.25	11.73 ± 2.74	0.960
Post-test	8.67 ± 3.86	11.13 ± 3.25	0.070
P-value ^c	< 0.001	0.279	
Differences between the 2 times	-3.13 ± 1.73	-0.6 ± 2.06	0.001
Stress			
Pre-test	11.87 ± 3.44	10.33 ± 2.84	0.194
Post-test	9.27 ± 3.62	10.4 ± 2.72	0.340
P-value ^c		< 0.001	0.887
Differences between the 2 times	-2.6 ± 2.06	0.07 ± 1.79	0.001
Mental health			
Pre-test	35.27 ± 8.51	31.93 ± 6.18	0.230
Post-test	27.27 ± 8.37	31.8 ± 6.74	0.114
P-value ^c		< 0.001	0.869
Differences between the 2 times	-8.0 ± 3.48	-0.13 ± 3.07	< 0.001

^a Values are expressed as mean ± SD.^b Independent samples *t*-test.^c Paired samples *t*-test.

fulfillment (47).

In essence, the core concept of resilience programs is educational, enabling students to identify negative thoughts and dysfunctional beliefs. Techniques such as evidence review, positive self-talk, and reframing are employed within cognitive-behavioral therapy to challenge dysfunctional beliefs, significantly reducing symptoms of depression. Additionally, resilience programs encompass various interpersonal skills, including problem-solving, anger management, assertiveness, and relaxation techniques. Acquiring these skills enhances students' resilience to adversity. Moreover, mastering interpersonal skills and fostering effective relationships can enhance overall quality of life by fostering social support, self-fulfillment, and interpersonal satisfaction (48, 49).

This study has several limitations, including:

- Small sample size.
- Caution should be exercised when generalizing the

results beyond sixth-grade girls in Qain city.

- The study aimed to assess the effectiveness of the resilience program in reducing symptoms of depression, anxiety, and stress in a non-clinical sample. Therefore, generalizing these results to patients with clinical disorders should be approached with caution.

- Reliance on self-reporting tools.
- Lack of follow-up studies.
- Potential for participants to exchange educational information.

Given the limited statistical population under study, future research should consider employing larger sample sizes, studying other groups, and implementing appropriate follow-up periods.

5.1. Conclusions

Enhancing resilience, which involves reducing negative dimensions such as depression, anxiety, and stress, positively impacts students' mental health.

Therefore, implementing resilience training programs can help enhance the mental health of students.

Footnotes

Authors' Contribution: All authors had equal contributions.

Conflict of Interests: The authors declared that they have no conflicts of interest.

Data Availability: The entirety of the data generated or analyzed during this study has been meticulously included in this article. In addition, data requests can be made to the corresponding author.

Ethical Approval: This study was approved by the ethics committee of Islamic Azad University, Birjand Branch (IR.IAU.BIRJAND.REC.1402.023).

Funding/Support: No funding or support for the current study was provided to the authors in any specific capacity.

Informed Consent: Before the start of the study, all participants completed an informed consent form and were assured that their information would be confidential and would be published anonymously.

References

- Gutmann MT, Aysel M, Ozlu-Erkilic Z, Popow C, Akkaya-Kalayci T. Mental health problems of children and adolescents, with and without migration background, living in Vienna, Austria. *Child Adolesc Psychiatry Ment Health*. 2019;**13**(1):35. [PubMed ID: 31528201]. [PubMed Central ID: PMC6737609]. <https://doi.org/10.1186/s13034-019-0295-y>.
- AlHamawi R, Khader Y, Abu Khudair S, Tanaka E, Al Nsour M. Mental Health and Psychosocial Problems among Children and Adolescents in Jordan: A Scoping Review. *Children (Basel)*. 2023;**10**(7). [PubMed ID: 37508662]. [PubMed Central ID: PMC10377849]. <https://doi.org/10.3390/children10071165>.
- Colizzi M, Lasalvia A, Ruggeri M. Prevention and early intervention in youth mental health: is it time for a multidisciplinary and trans-diagnostic model for care? *Int J Ment Health Syst*. 2020;**14**(1):23. [PubMed ID: 32226481]. [PubMed Central ID: PMC7092613]. <https://doi.org/10.1186/s13033-020-00356-9>.
- Zarimoghadam Z, Davoodi H, Ghafari K, Jamilian H. The Effects of Mental Self-care Training on Mental Health and Academic Achievement in Students. *J Arak Univ Med Sci*. 2021;**24**(1):150-67. <https://doi.org/10.32598/jams.24.1.6155.1>.
- Abou Abbas O, AlBuhairan F. Predictors of adolescents' mental health problems in Saudi Arabia: findings from the Jeeluna((R)) national study. *Child Adolesc Psychiatry Ment Health*. 2017;**11**(1):52. [PubMed ID: 28959356]. [PubMed Central ID: PMC5615485]. <https://doi.org/10.1186/s13034-017-0188-x>.
- Homan KJ, Sirois FM. Self-compassion and physical health: Exploring the roles of perceived stress and health-promoting behaviors. *Health Psychol Open*. 2017;**4**(2). [PubMed ID: 29379620]. [PubMed Central ID: PMC5779931]. <https://doi.org/10.1177/2055102917729542>.
- Smith GD, Yang F. Stress, resilience and psychological well-being in Chinese undergraduate nursing students. *Nurse Educ Today*. 2017;**49**:90-5. [PubMed ID: 27889584]. <https://doi.org/10.1016/j.nedt.2016.10.004>.
- Schmitt A, Malchow B, Hasan A, Falkai P. The impact of environmental factors in severe psychiatric disorders. *Front Neurosci*. 2014;**8**:19. [PubMed ID: 24574956]. [PubMed Central ID: PMC3920481]. <https://doi.org/10.3389/fnins.2014.00019>.
- Dehdari T, Yarahmadi R, Taghdisi MH, Daneshvar R, Ahmad Poor J. The relationship between meaning in life and depression, anxiety and stress status among college students of Iran University of Medical Sciences in 2013. *Iran J Health Educ Health Promot*. 2013;**1**(3):83-92.
- Hbib M, Ghanbari N, Khodaei E, Ghanbari P. Effectiveness of cognitive-behavioral management of stress on reducing anxiety, stress, and depression in head-families women. *J Res Behav Sci*. 2013;**11**(3):166-75.
- Zhang D, Cui Y, Zhou Y, Cai M, Liu H. The Role of School Adaptation and Self-Concept in Influencing Chinese High School Students' Growth in Math Achievement. *Front Psychol*. 2018;**9**:2356. [PubMed ID: 3055381]. [PubMed Central ID: PMC6282037]. <https://doi.org/10.3389/fpsyg.2018.02356>.
- Mohammadbeygi A, Mohammad salehi N, Ghamari F, Salehi B. [Depression symptoms prevalence, general health status and its risk factors in dormitory students of Arak universities 2008]. *J Arak Univ Med Sci*. 2009;**12**(3):116-23. Persian.
- Sahebalzamin M, Khanavi M, Alvi majd H, Mirkarimi SM, Karimi M. [Effects of inhalation aromatherapy on female students' anxiety and depression settling in dormitory of Tehran University of Medical Sciences]. *Med Sci J Islamic Azad Univ*. 2010;**20**(3):175-81. Persian.
- Fazel M, Hoagwood K, Stephan S, Ford T. Mental health interventions in schools in high-income countries. *Lancet Psychiat*. 2014;**1**(5):377-87. [https://doi.org/10.1016/s2215-0366\(14\)70312-8](https://doi.org/10.1016/s2215-0366(14)70312-8).
- Wei P. The impact of social support on students' mental health: A new perspective based on fine art majors. *Front Psychol*. 2022;**13**:994157. [PubMed ID: 36405200]. [PubMed Central ID: PMC9672807]. <https://doi.org/10.3389/fpsyg.2022.994157>.
- Ungar M, Russell P, Connelly G. School-Based Interventions to Enhance the Resilience of Students. *Journal of Educational and Developmental Psychology*. 2014;**4**(1). <https://doi.org/10.5539/jedp.v4n1p66>.
- Rojas F LF. Factors Affecting Academic Resilience in Middle School Students: A Case Study. *GIST Education and Learning Research Journal*. 2015;**11**:63-78. <https://doi.org/10.26817/16925777.286>.
- Caldeira S, Timmins F. Resilience: Synthesis of concept analyses and contribution to nursing classifications. *Int Nurs Rev*. 2016;**63**(2):91-9.
- Masten AS. Resilience Theory and Research on Children and Families: Past, Present, and Promise. *J Fam Theor Rev*. 2018;**10**(1):12-31. <https://doi.org/10.1111/jftr.12255>.
- Scheffers F, van Vugt E, Moonen X. Resilience in the face of adversity in adults with an intellectual disability: A literature review. *J Appl Res Intellect Disabil*. 2020;**33**(5):828-38. [PubMed ID: 32153087]. [PubMed Central ID: PMC7496528]. <https://doi.org/10.1111/jar.12720>.
- Takayama N, Morikawa T, Bielinis E. Relation between Psychological Restorativeness and Lifestyle, Quality of Life, Resilience, and Stress-Coping in Forest Settings. *Int J Environ Res Public Health*. 2019;**16**(8). [PubMed ID: 31022942]. [PubMed Central ID: PMC6518360]. <https://doi.org/10.3390/ijerph16081456>.
- Moljord IEO, Moksnes UK, Espnes GA, Hjemdal O, Eriksen L. Physical activity, resilience, and depressive symptoms in adolescence. *Mental Health and Physical Activity*. 2014;**7**(2):79-85. <https://doi.org/10.1016/j.mhpa.2014.04.001>.
- Steensma H, Den Heijer M, Stallen V. Research note: effects of resilience training on the reduction of stress and depression among Dutch workers. *Int Q Community Health Educ*. 2006;**27**(2):145-59. [PubMed ID: 18364303]. <https://doi.org/10.2190/IQ.27.2.e>.
- Steinhardt M, Dolbier C. Evaluation of a resilience intervention to enhance coping strategies and protective factors and decrease symptomatology. *J Am Coll Health*. 2008;**56**(4):445-53. [PubMed ID: 18316290]. <https://doi.org/10.3200/JACH.56.4.445-454>.

25. Hosseini Ghomi T, Jahanbakhshi Z. [Effectiveness of resilience training on stress and mental health of mothers whose have children suffering mental retardation]. *Counseling Culture and Psychotherapy*. 2021;**12**(46):205–28. Persian. <https://doi.org/10.22054/qccpc.2020.50262.2327>.
26. Sahebi A, Asghari MJ, Salari RS. [Validation of depression anxiety and stress scale (DASS-21) for an Iranian population]. *J Iran Psychol*. 2005;**1**(4):36–54. Persian.
27. Seyed Mahmoudi J. The influential determinants of resilience in people with trauma. *Research in Clinical Psychology and Counseling*. 2011;**1**(1). <https://doi.org/10.22067/ijap.viit.1135>.
28. Kordi M, Banaei Heravan M. The Relationship of depression, anxiety, and stress with self-care behaviors in women with gestational diabetes. *Journal of Midwifery and Reproductive Health*. 2020;**8**(1):2083–95. <https://doi.org/10.22038/jmrh.2019.41459.1471>.
29. Rezaei Adriani M, Azadi A, Ahmadi F, Vahedian Azimi A. Comparison of depression, anxiety, stress and quality of life in dormitories students of Tarbiat Modares University. *Iran J Nurs Res*. 2007;**2**(5):31–8.
30. Tabatabaei SM, Chalabainloo G. The Effectiveness of Resilience Training on Positive and Negative Affect and Reduction of Psychological Distress in Mothers of Children With Attention Deficit Hyperactivity Disorder. *Journal of Arak University of Medical Sciences*. 2020;**23**(4):438–49. <https://doi.org/10.32598/jams.23.4.1224.5>.
31. Jahed Motlagh M, Younesi J, Azkosh M, Farzi M. [The effect of training on psychological stress resiliency of female students living in dormitories]. *J Sch Psychol*. 2015;**4**(2):7–21. Persian. <https://doi.org/10.22098/jsp.2015.322>.
32. Devi HM, Purborini N, Chang HJ. Mediating effect of resilience on association among stress, depression, and anxiety in Indonesian nursing students. *J Prof Nurs*. 2021;**37**(4):706–13. [PubMed ID: 34187668]. <https://doi.org/10.1016/j.profnurs.2021.04.004>.
33. Horowitz JL, Garber J, Ciesla JA, Young JF, Mufson L. Prevention of depressive symptoms in adolescents: a randomized trial of cognitive-behavioral and interpersonal prevention programs. *J Consult Clin Psychol*. 2007;**75**(5):693–706. [PubMed ID: 17907851]. <https://doi.org/10.1037/0022-006X.75.5.693>.
34. Gillham JE, Hamilton J, Freres DR, Patton K, Gallop R. Preventing depression among early adolescents in the primary care setting: a randomized controlled study of the Penn Resiliency Program. *J Abnorm Child Psychol*. 2006;**34**(2):203–19. [PubMed ID: 16741684]. <https://doi.org/10.1007/s10802-005-9014-7>.
35. Allen PM, Datta PP, Christopher M. Improving the Resilience and Performance of Organizations Using Multi-Agent Modelling of a Complex Production–Distribution Systems. *Risk Management*. 2006;**8**(4):294–309. <https://doi.org/10.1057/palgrave.rm.8250019>.
36. Vernon A, Bernard ME. Applications of REBT in Schools: Prevention, Promotion, Intervention. In: Ellis A, Bernard ME, editors. *Rational Emotive Behavioral Approaches to Childhood Disorders: Theory, Practice and Research*. Boston: Springer; 2006. p. 415–60. <https://doi.org/10.1007/0-387-26375-6.14>.
37. Yamamoto T, Matsumoto Y, Bernard ME. Effects of the cognitive-behavioral You Can Do It! Education program on the resilience of Japanese elementary school students: A preliminary investigation. *International Journal of Educational Research*. 2017;**86**:50–8. <https://doi.org/10.1016/j.ijer.2017.08.006>.
38. Caldarella P, Christensen L, Kramer TJ, Kronmiller K. Promoting Social and Emotional Learning in Second Grade Students: A Study of the Strong Start Curriculum. *Early Childhood Education Journal*. 2009;**37**(1):51–6. <https://doi.org/10.1007/s10643-009-0321-4>.
39. Fava GA, Tomba E. Increasing psychological well-being and resilience by psychotherapeutic methods. *J Pers*. 2009;**77**(6):1903–34. [PubMed ID: 19807860]. <https://doi.org/10.1111/j.1467-6494.2009.00604.x>.
40. Gadari S, Farokhzadian J, Shahrabaki PM. Effectiveness of Virtual Resilience Training on Assertiveness in Student Girls Aged 9-10 Years: A 1-Month Follow-Up. *J Sch Nurs*. 2023;**39**(4):313–20. [PubMed ID: 33977815]. <https://doi.org/10.1177/10598405211013522>.
41. Sahin H, Turk F. The Impact of Cognitive-Behavioral Group Psycho-Education Program on Psychological Resilience, Irrational Beliefs, and Well-Being. *J Ration Emot Cogn Behav Ther*. 2021;**39**(4):672–94. [PubMed ID: 33824549]. [PubMed Central ID: PMC8016428]. <https://doi.org/10.1007/s10942-021-00392-5>.
42. Zhao Y, Pan Q. Effect of Social-Psychological Intervention on Self-Efficacy, Social Adaptability and Quality of Life of Internet-Addicted Teenagers. *Psychiatr Danub*. 2022;**34**(3):490–6. [PubMed ID: 36256987]. <https://doi.org/10.24869/psyd.2022.490>.
43. Ang WHD, Shorey S, Zheng ZJ, Ng WHD, Chen EC, Shah LBI, et al. Resilience for Undergraduate Students: Development and Evaluation of a Theory-Driven, Evidence-Based and Learner Centered Digital Resilience Skills Enhancement (RISE) Program. *Int J Environ Res Public Health*. 2022;**19**(19). [PubMed ID: 36232028]. [PubMed Central ID: PMC9564580]. <https://doi.org/10.3390/ijerph191912729>.
44. Zhao L, Sznajder K, Cheng D, Wang S, Cui C, Yang X. Coping Styles for Mediating the Effect of Resilience on Depression Among Medical Students in Web-Based Classes During the COVID-19 Pandemic: Cross-sectional Questionnaire Study. *J Med Internet Res*. 2021;**23**(6). e25259. [PubMed ID: 34033579]. [PubMed Central ID: PMC8189284]. <https://doi.org/10.2196/25259>.
45. Wong PT. Meaning therapy: An integrative and positive existential psychotherapy. *Journal of Contemporary Psychotherapy*. 2010;**40**(2):85–93.
46. Wong PTP. Existential positive psychology and integrative meaning therapy. *Int Rev Psychiatry*. 2020;**32**(7-8):565–78. [PubMed ID: 33016788]. <https://doi.org/10.1080/09540261.2020.1814703>.
47. Lyubomirsky S, King L, Diener E. The benefits of frequent positive affect: does happiness lead to success? *Psychol Bull*. 2005;**131**(6):803–55. [PubMed ID: 16351326]. <https://doi.org/10.1037/0033-2909.131.6.803>.
48. Southwick SM, Bonanno GA, Masten AS, Panter-Brick C, Yehuda R. Resilience definitions, theory, and challenges: interdisciplinary perspectives. *Eur J Psychotraumatol*. 2014;**5**. [PubMed ID: 25317257]. [PubMed Central ID: PMC4185134]. <https://doi.org/10.3402/ejtp.v5.25338>.
49. Fleming J, Ledogar RJ. Resilience, an Evolving Concept: A Review of Literature Relevant to Aboriginal Research. *Pimatisiwin*. 2008;**6**(2):7–23. [PubMed ID: 20963184]. [PubMed Central ID: PMC2956753].