




The Effectiveness of Lazarus Multimodal Psychotherapy on Experiential Avoidance and Rumination in Adolescent Girls with Gastrointestinal Disorders in Isfahan

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ABSTRACT

Objective: The present study aimed to examine the effectiveness of Lazarus multimodal therapy on experiential avoidance and rumination in adolescent girls with gastrointestinal disorders in Isfahan.

Methods and Materials: This study employed a quasi-experimental design with a pretest-posttest control group. The statistical population included all adolescent girls with gastrointestinal disorders in Isfahan. The sample consisted of thirty adolescent girls selected through convenience sampling and non-randomly assigned to experimental and control groups. While the control group was placed on a waiting list, the experimental group received Lazarus multimodal therapy interventions over eight 90-minute training sessions. Both groups were assessed in the pretest and posttest stages using the study instruments. These instruments included the Experiential Avoidance Questionnaire (Gamez et al., 2011) and the Rumination Questionnaire (Nolen-Hoeksema & Morrow, 1991). The collected data were analyzed using descriptive statistics (mean and standard deviation) and inferential statistics (repeated measures analysis of variance).

Findings: The results indicated that this method effectively improved both psychological constructs ($p < 0.01$).

Conclusion: Based on these findings, it can be concluded that this approach was effective in reducing experiential avoidance and rumination in adolescent girls with gastrointestinal disorders.

Keywords: Lazarus multimodal psychotherapy, experiential avoidance, rumination, gastrointestinal disorders.

1. Introduction

Adolescence is considered a crucial stage of life in which individuals experience significant psychological, social, and physical changes (Silvers, 2022).

These changes expose adolescents to various challenges and crises, including the desire for independence, peer orientation, cognitive development, and sexual maturation. At the same time, their lack of experience, combined with social, school, and family expectations, as well as academic

growth and career planning, may lead to numerous difficulties (Coleman, 2022; Sisk & Gee, 2022). The stress resulting from these challenges can manifest in physical symptoms caused by an unhealthy lifestyle, including poor nutrition and lack of physical activity, or as a psychosomatic response. One of the most prevalent issues related to this condition is gastrointestinal disorders (Ashurova et al., 2023).

Research indicates that individuals with gastrointestinal disorders experience a higher prevalence of psychological problems such as depression, stress, and anxiety throughout their illness (Timmer, 2023). Additionally, due to lower levels of social support, their overall health is more vulnerable (Balistreri et al., 2023). These individuals tend to use more maladaptive emotion regulation strategies when faced with stressful events (Chogle, 2024).

One of the major issues that adolescents may struggle with from childhood is the avoidance of difficult and painful internal experiences. This avoidance may lead them to distance themselves from core life experiences in order to escape anxiety. Known as experiential avoidance, this phenomenon is a common psychological and behavioral pathology that consists of two main components: reluctance to engage with personal experiences (including bodily sensations, emotions, thoughts, memories, and behavioral contexts) and active efforts to avoid painful experiences or the stimuli that trigger them (Cavicchioli et al., 2021). This form of avoidance includes behavioral, emotional, and cognitive avoidance. Experiential avoidance is recognized as a psychopathological factor in various psychological disorders (Nazari et al., 2022). It becomes problematic when it interferes with daily functioning and goal achievement (Ghasemi Jobaneh et al., 2023). Experiential avoidance can leave adolescents struggling with unresolved personal and interpersonal issues, which in turn serve as a source of rumination (Bishop et al., 2018).

Rumination is defined as a continuous and cyclical pattern of anxious thinking and is a relatively common response to negative mood states, constituting a prominent cognitive feature of distress and anxiety disorders (Gao & Du, 2025). Moreover, rumination involves repetitive negative thoughts and is considered a transdiagnostic factor in emotional disorders. It has significant associations with other metacognitive components, including worry, intolerance of uncertainty, and metacognitive beliefs related to rumination (Dong et al., 2025). Essentially, rumination refers to persistent and recurrent thoughts about a particular issue. These thoughts intrude into consciousness

involuntarily and divert attention from intended goals (Donohue et al., 2024). In individuals with poor mental health, rumination tends to focus on negative topics. It typically fosters mechanisms that increase vulnerability to anxiety, contributing to heightened stress, neuroticism, reduced social support, and lower optimism (Rose, 2021).

Various psychological treatments have been employed for gastrointestinal disorders. For instance, Karimian et al. (2021) examined the effectiveness of transdiagnostic therapy (Karimian et al., 2021), Derakhshan et al. (2022) explored acceptance and commitment therapy (ACT) (Derakhshan Jan et al., 2022), Noori et al. (2023) investigated covert exposure therapy (Noori et al., 2023), Eskafi et al. (2022) assessed mindfulness-based cognitive therapy (MBCT) (Eskafi Sabat et al., 2022), Jafari and Johari-Fard (2023) studied short-term psychodynamic therapy (Jafari & Johari, 2023), and Balouchi and Ahmadi (2023) examined the effectiveness of compassion-focused therapy (CFT) and schema therapy in improving psychological conditions (Baluchi & Ahmadi, 2024).

One such psychological approach is Lazarus's multimodal psychotherapy, which is rooted in cognitive-behavioral therapy. This eclectic approach is based on social-cognitive learning theory, where the therapist plays a guiding role by addressing all aspects of an individual's personality, including behavior, affect, sensation, imagery, cognition, interpersonal relationships, and biological factors. The therapist selects interventions from various perspectives based on what is deemed beneficial and effective, without necessarily adhering to a specific theoretical foundation (Lazarus, 2005). The goal of this therapy is not only to reduce maladaptive behaviors and attitudes but also to promote more constructive and satisfying behaviors. This therapy is implemented through systematic planning and methodology, emphasizing techniques and strategies rather than theoretical models, which is why Lazarus referred to it as technical eclecticism (Lazarus, 2005, 2006; Lazarus & Abramovitz, 2004).

Adolescent girls with gastrointestinal disorders represent a significant patient population in medical settings. Given the sensitivity of this developmental period, they require psychological interventions in addition to pharmacotherapy for gastrointestinal symptoms. Lazarus's multimodal therapy, due to its comprehensive approach and focus on various psychological dimensions, appears to be a suitable intervention for this population. It is expected to help reduce experiential avoidance and rumination. Accordingly, this study aimed to address this issue. The findings of this study

not only contribute to the existing research literature on these psychological variables but also offer a potentially effective treatment approach for this group of adolescents. Therefore, the present study sought to answer the question: Does Lazarus's multimodal psychotherapy have a significant effect on experiential avoidance and rumination in adolescent girls with gastrointestinal disorders?

2. Methods and Materials

2.1. Study Design and Participants

The aim of this study was to investigate the effectiveness of Lazarus multimodal therapy on experiential avoidance and rumination in adolescent girls with gastrointestinal disorders in Isfahan. The present study was a quasi-experimental and applied research employing a pretest-posttest design with a 45-day follow-up and a control group. The research method followed a quasi-experimental approach with a pretest-posttest design and a control group.

The statistical population included all adolescent girls with gastrointestinal disorders who had visited health centers. From this population, 30 participants were purposefully selected and randomly assigned to two groups: an experimental group and a control group, with 15 participants in each.

The inclusion criteria were as follows: adolescent girls diagnosed with gastrointestinal disorders according to their medical records at the health center, no concurrent psychological treatment, no psychiatric medication use in the past three months (verified through participant self-report), the ability to attend all sessions, no other diagnosed physical illnesses (confirmed by a physician and acknowledged by the participant), and obtaining informed consent from parents. The exclusion criteria included non-cooperation, failure to complete assigned tasks during sessions, and missing more than two sessions.

To conduct the study, necessary approvals were obtained from the university, followed by authorization from the academic and research departments. Health centers in Isfahan willing to collaborate in the study were approached, and two accessible centers were selected. After advertisements were made regarding the training program, 30 adolescent girls with gastrointestinal disorders who met the inclusion and exclusion criteria were selected and randomly assigned to the experimental and control groups.

Both groups completed the pretest assessments. While the control group was placed on a waiting list, the experimental group received Lazarus multimodal therapy in eight 90-

minute sessions over one and a half months at the health center. Following the intervention, both groups underwent posttest assessments, and a follow-up assessment was conducted one and a half months later using the same research instruments. The training sessions were conducted at one of the selected health centers and were facilitated by the researcher.

To ensure ethical considerations, informed consent was obtained from parents, and participant identities remained confidential. Participants were informed that their data would be analyzed collectively, and they had the right to withdraw from the sessions at any time.

2.2. Measures

2.2.1. Experiential Avoidance

Experiential avoidance was assessed using the Experiential Avoidance Questionnaire developed by Gamez et al. (2011). This questionnaire consists of 62 items and includes six subscales: behavioral avoidance, procrastination, distraction/suppression, denial/repression, and distress tolerance. Responses are rated on a five-point Likert scale ranging from "strongly agree" to "strongly disagree." Gamez et al. (2011) reported Cronbach's alpha coefficients ranging from 0.91 to 0.95 for different samples and a correlation of 0.74 ($r = 0.74$) with the Acceptance and Action Questionnaire, indicating good validity (Gámez et al., 2011). In the present study, Cronbach's alpha coefficients for the subscales were as follows: behavioral avoidance (0.77), maladaptive distress (0.70), procrastination (0.55), distraction/suppression (0.80), denial/repression (0.78), and distress tolerance (0.79).

2.2.2. Rumination

Rumination was measured using the Rumination Questionnaire developed by Nolen-Hoeksema and Morrow (1991). This questionnaire consists of 22 items scored on a four-point Likert scale (1 = never to 4 = often) and assesses responses to negative mood. It includes two subscales: rumination responses and distraction responses, each containing 11 items. The original developers confirmed its validity and reliability through convergent and construct validity tests, reporting an internal consistency above 0.75. Psychometric properties of the instrument have also been reported as satisfactory in Iran (Nolen-Hoeksema & Morrow, 1991). In the present study, internal consistency

was reassessed, and Cronbach's alpha for the total score was found to be 0.80.

2.3. Intervention

2.3.1. Lazarus Multimodal Therapy

The intervention protocol for Lazarus multimodal therapy was adapted from Hojatkhah et al. (2021) and was implemented over eight structured sessions, each focusing on different therapeutic dimensions (Hojatkhah et al., 2021). In the first session, participants were introduced to the nature of counseling, the specific features of Lazarus multimodal therapy, and the interaction of the seven dimensions in the onset and persistence of medical disorders. The concept of mental well-being was discussed, and participants were assigned a life history questionnaire as homework. In the second session, participants reviewed their homework and engaged in a participatory discussion on how the seven dimensions interact, based on their completed questionnaires. They were assigned Lazarus and Fay's (2003) book "The Forty Toxic Thoughts" for home reading. The third session focused on analyzing the dimensional and structural profiles prepared by the therapist, fostering a discussion on selecting the healthiest dimension to enhance motivation for intervention. Participants were asked to create their own structural profile as homework. The fourth session introduced imagery-based techniques, such as the whiteboard technique and the highest-limit visualization exercise, to facilitate cognitive restructuring.

In the fifth session, assertiveness training was conducted, covering skills like ambiguity resolution, breaking records, expressing negative emotions, and role-playing to enhance interpersonal competence. The sixth session introduced behavioral techniques, including self-monitoring, positive reinforcement, and punishment through reparation, along with training in assertiveness and friendship skills to improve interpersonal relationships. The seventh session focused on sensory reception techniques, such as group progressive muscle relaxation, and biological or lifestyle techniques, including regular exercise, proper nutrition, sleep hygiene, and reducing tobacco and alcohol use. Finally, in the eighth session, cognitive techniques were

introduced, such as challenging cognitive distortions and constructive self-talk. The session concluded with a review of previous sessions, a discussion on post-treatment follow-up strategies, participant reflections on the overall therapy process, and posttest completion. Throughout the intervention, participants were assigned structured homework to reinforce learning and encourage the application of therapeutic techniques in their daily lives.

2.4. Data Analysis

The collected data were analyzed using SPSS version 26. Descriptive statistics, including mean and standard deviation, were used to summarize the data. The Shapiro-Wilk test was conducted to assess the normality of the distribution of the variables, and Levene's test was used to evaluate the homogeneity of variances. To examine the effectiveness of Lazarus multimodal therapy, a repeated measures analysis of variance (ANOVA) was performed, comparing pretest, posttest, and follow-up scores between the experimental and control groups. The Greenhouse-Geisser correction was applied where necessary to adjust for violations of sphericity. Additionally, the Bonferroni post-hoc test was used to determine significant differences between measurement phases. Partial eta squared was calculated to measure the effect size, and statistical power was reported to assess the strength of the analyses. A significance level of $p < 0.05$ was considered for all statistical tests.

3. Findings and Results

To address the research question, "Does Lazarus multimodal therapy have a significant effect on experiential avoidance and rumination in adolescent girls with gastrointestinal symptoms?", repeated measures analysis of variance (ANOVA) was conducted. The results of this analysis are presented below.

The mean and standard deviation of experiential avoidance and rumination scores for both the experimental and control groups across the three measurement phases (pretest, posttest, and follow-up) are presented in Table 1.

Table 1

Mean and Standard Deviation of Research Variables by Group Across Study Phases

Variable	Phase	Experimental (M ± SD)	Control (M ± SD)
Experiential Avoidance	Pretest	271.40 ± 4.20	261.27 ± 13.47
	Posttest	226.1 ± 15.11	249.23 ± 12.93
	Follow-up	226.4 ± 15.30	247.67 ± 9.78
Rumination	Pretest	59.00 ± 3.07	59.53 ± 8.24
	Posttest	41.67 ± 6.63	56.47 ± 7.19
	Follow-up	41.20 ± 7.23	55.53 ± 7.68

The results in Table 1 indicate that the mean scores of experiential avoidance and rumination in the experimental group significantly decreased in the posttest and follow-up phases compared to the control group.

The results of the Shapiro-Wilk test confirmed the normality of the distribution of the primary research

variables ($p \geq 0.05$). Additionally, Levene's test indicated homogeneity of variances across groups for both experiential avoidance and rumination scores ($p \geq 0.05$). Mauchly's test of sphericity was significant, so the Greenhouse-Geisser correction was applied. The results of the repeated measures ANOVA are reported in Table 2.

Table 2

Repeated Measures ANOVA Results for Experiential Avoidance and Rumination Across Three Measurement Phases

Variable & Source	SS	df	MS	F	Sig.	Partial Eta Squared	Power
Experiential Avoidance							
Time	16806.689	1.156	14533.759	107.089	0.001	0.793	1
Time × Group	5240.289	1.156	4531.594	33.39	0.001	0.544	1
Error	4394.356	32.379	135.717	-	-	-	-
Group	2935.511	1	2935.511	8.048	0.008	0.223	0.782
Error	10213.144	28	364.755	-	-	-	-
Rumination							
Time	2143.4	1.062	2018.497	79.269	0.001	0.739	1
Time × Group	916.822	1.062	863.396	33.907	0.001	0.548	1
Error	757.111	29.733	24.464	-	-	-	-
Group	2054.444	1	2054.444	17.844	0.001	0.389	0.983
Error	3223.822	28	115.137	-	-	-	-

For experiential avoidance, the effect of time ($F = 107.089$, $df = 1.156$, $p < 0.01$) and the interaction of time × group ($F = 33.39$, $df = 1.156$, $p < 0.01$) were significant, indicating that at least one of the groups showed significant differences in experiential avoidance scores across the three time points. The partial eta squared for time was 0.793 with a statistical power of 1, and for the interaction of time × group, it was 0.544 with a statistical power of 1. These results indicate that 79.3% of the variance in experiential avoidance was explained by time, and 54.4% by the interaction of time and group. The effect of group was also significant ($F = 8.048$, $df = 1$, $p < 0.01$), suggesting that Lazarus multimodal therapy effectively reduced experiential avoidance. The partial eta squared for the group effect was 0.223, with a statistical power of 0.782, confirming that 22.3% of the variance in experiential avoidance was attributed to the group factor.

For rumination, the effect of time ($F = 79.269$, $df = 1.062$, $p < 0.01$) and the interaction of time × group ($F = 33.907$, $df = 1.062$, $p < 0.01$) were also significant. This suggests that at least one of the groups showed significant differences in rumination scores across the three time points. The partial eta squared for time was 0.739, with a statistical power of 1, and for the interaction of time × group, it was 0.548, with a statistical power of 1. These results indicate that 73.9% of the variance in rumination was explained by time and 54.8% by the interaction of time and group. The effect of group was also significant ($F = 17.844$, $df = 1$, $p < 0.01$), indicating that Lazarus multimodal therapy significantly reduced rumination. The partial eta squared for the group effect was 0.389, with a statistical power of 0.983, confirming that 38.9% of the variance in rumination was attributed to the group factor.

To further explore the differences between time points, Bonferroni post-hoc comparisons were conducted, and the results are presented in [Table 3](#).

Table 3

Bonferroni Post-hoc Comparison for Experiential Avoidance and Rumination

Variable	Comparison	Mean Difference	p-value	Significance
Experiential Avoidance	Pretest - Posttest	45.30	0.001	Significant
	Pretest - Follow-up	45.00	0.001	Significant
	Posttest - Follow-up	0.30	0.823	Not Significant
Rumination	Pretest - Posttest	17.33	0.001	Significant
	Pretest - Follow-up	17.80	0.001	Significant
	Posttest - Follow-up	0.47	0.731	Not Significant

The Bonferroni post-hoc test results indicate that for both experiential avoidance and rumination, the pretest-posttest and pretest-follow-up comparisons showed significant reductions ($p < 0.001$), confirming the effectiveness of Lazarus multimodal therapy. However, the posttest-follow-up comparisons were not significant ($p > 0.05$), indicating that the therapeutic effects were maintained over time without further significant changes.

Taken together, these findings suggest that Lazarus multimodal therapy was effective in reducing experiential avoidance and rumination in adolescent girls with gastrointestinal disorders, and these improvements were sustained during the follow-up phase.

4. Discussion and Conclusion

This study aimed to answer the question: Does Lazarus multimodal therapy have a significant effect on experiential avoidance and rumination in adolescent girls with gastrointestinal disorders? The results of the repeated measures analysis of variance indicated that this method effectively improved experiential avoidance and rumination in these adolescents.

Regarding the alignment and divergence of this study's findings with previous research, it can be stated that the results of this study are consistent with those of Hojatkhah et al. (2021), who demonstrated the impact of Lazarus multimodal therapy on psychological well-being ([Hojatkhah et al., 2021](#)), Derakhshan et al. (2018), who found its effectiveness in reducing depressive and anxiety symptoms ([Derakhshan Shahreabad et al., 2018](#)), Iranizadeh et al. (2020), who showed its role in family cohesion ([Iranizadeh et al., 2020](#)), and Mirzadeh and Taher (2022), who reported its positive effect on self-esteem ([Mirzadeh & Taher, 2022](#)).

Explaining the effectiveness of Lazarus multimodal therapy on experiential avoidance, it can be noted that experiential avoidance refers to an individual's deliberate avoidance of painful internal experiences such as distressing memories, thoughts, and emotions. The person seeks to achieve a calmer life by distancing themselves from emotions such as depression, worry, loneliness, lethargy, and anger, which is contrary to acceptance. This avoidance prevents the development of interpersonal and cognitive skills, leading to cognitive fusion with self-concepts, allowing past experiences to dominate the individual and restricting opportunities for new experiences, ultimately making adaptation more difficult ([Hayes-Skelton & Eustis, 2020](#)). Consequently, avoidance may become a lifestyle, causing individuals to constantly imagine the worst possible scenarios, leading to a self-limiting existence. It appears that Lazarus multimodal therapy provided mechanisms and techniques that effectively reduced experiential avoidance.

Similarly, rumination is a response to painful internal experiences and may result from difficult interpersonal relationships or gaps in learning and life experiences. Rumination, which is a response to depressive mood, can increase anxiety and other negative emotions such as anger and resentment, thereby impairing cognitive functions such as concentration, attention, memory, and perception, leading to cognitive biases that intensify rumination. The exacerbation of rumination can negatively affect emotional regulation, interpersonal relationships, and executive functioning, making the psychological condition of the individual more unstable ([Watkins & Robert, 2020](#)). Therefore, it seems that Lazarus multimodal therapy incorporated mechanisms that effectively reduced rumination.

Several mechanisms of this therapeutic approach can be highlighted:

From a behavioral perspective, major techniques included positive reinforcement, negative reinforcement, punishment, counter-conditioning, and extinction of maladaptive behaviors (Lazarus, 2006). These techniques allowed participants to identify which of their behaviors they wished to modify or reduce, enabling them to develop their own behavioral management plan. It appears that these behavioral techniques helped the participants develop resilience in confronting difficult situations, thereby reducing experiential avoidance. Additionally, these behavioral techniques reduced self-blame caused by maladaptive behaviors, leading to a decrease in rumination. A third explanation for the improvement in both experiential avoidance and rumination is that behavioral management using these techniques increased self-efficacy, making it easier for participants to face new or difficult internal and external situations. Increased self-efficacy facilitated emotional regulation, which contributed to reducing rumination.

From an affective and sensory perspective, expressing and accepting emotions, releasing tension, and enjoying sensory experiences are important techniques. In the imagery domain, coping imagery and modifications in self-concept (Lazarus & Abramovitz, 2004) were the most important mechanisms for improvement. This improvement can be attributed to the fact that participants learned to accept emotions and release tension, realizing that negative emotions are an inevitable part of life, alongside positive emotions. They learned to accept negative emotions rather than engaging in self-blame, using relaxation and coping imagery techniques. These techniques played a crucial role in enhancing their ability to face life's challenges and helped them shift from rumination toward problem-solving and adaptive coping strategies instead of avoidance.

From a cognitive perspective, enhancing awareness and cognitive restructuring were key elements. Techniques such as exposure through immersive imagery, positive imagery, rational/emotional imagery, bibliotherapy, challenging flawed inferences, cognitive exercises, verbal coping strategies, correcting misconceptions, challenging irrational beliefs, improving focus, positive self-talk, and problem-solving training (Lazarus, 2005) enabled participants to confront their maladaptive cognitions, including irrational beliefs and dysfunctional rules, and replace them with more rational thoughts. One of the most effective strategies in this domain was questioning, which helped individuals identify

cognitive distortions. Through this process, the adolescent participants learned how to modify their thought patterns, allowing them to cope better with life's challenges. Cognitive modifications also contributed to emotional regulation, leading to a reduction in rumination.

From an interpersonal perspective, nonjudgmental acceptance, appropriate modeling, and deconstructing unhealthy interpersonal structures were key strategies. Techniques such as self-acceptance training, assertiveness training, social skills training, conflict resolution, and friendship training played a crucial role in reducing interpersonal distress and enhancing peer relationships. These techniques facilitated better social integration, improved friendship skills, and reduced peer pressure. It appears that these techniques helped adolescent girls experience less loneliness and rejection, leading to better emotional regulation and, consequently, a reduction in experiential avoidance and rumination.

Based on the results of this study, Lazarus multimodal therapy appears to be a suitable intervention for improving the psychological conditions of adolescent girls with gastrointestinal disorders. Like all research, this study has limitations, including the non-random selection of participants, which may affect the generalizability of the findings. Future research is recommended to use randomized selection methods. Additionally, it is suggested that adolescent counselors and psychologists incorporate Lazarus multimodal therapy as an intervention to improve the psychological well-being of adolescents.

5. Limitations & Suggestions

The present study faced limitations. It was limited to female high school students in District 3 of Tehran during the 2023-2024 academic year, which may affect the generalizability of the findings to other student populations. Long-term effects of the interventions were not assessed, leaving the sustainability of results uncertain. Factors such as family conditions, economic status, and social support levels may have influenced the outcomes and were not fully controlled. The study focused on nomophobia symptoms and may be less effective for other disorders or behavioral issues.

Based on the results, it is recommended that teachers and school counselors be trained in Reality Therapy and ACT techniques to promote students' mental health. Group-based programs using these approaches should be implemented in schools to enhance social adaptation. These interventions

should also be integrated into family counseling sessions to provide additional support at home. Awareness workshops for parents on nomophobia and coping strategies should be organized. Given the novelty and importance of this research, similar studies should be conducted on other societal groups. Long-term effects of these interventions on social adaptation should be evaluated, and the effectiveness of ACT and Reality Therapy should be compared with other psychological interventions, such as cognitive therapy or compassion-based therapy. Online training programs based on these approaches should be developed to assess their effectiveness in virtual settings.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

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

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contributed to this article.

References

- Ashurova, M. D., Makhamatov, U. S., Saydullaeva, K. M., Valiyev, A. L., & Isroilov, F. I. (2023). Determining the health of children and adolescents. *Bio Web of Conferences*,
Baluchi, T., & Ahmadi, R. (2024). Comparison of the Effectiveness of Compassion-Focused Therapy and Schema Therapy on Psychosomatic Symptoms in Individuals with Physical Illnesses. *Royesh Psychology Scientific Journal*, 12(11), 131-140. <https://frooyesh.ir/article-1-4889-en.html>

- Bishop, L. S., Ameral, V. E., & Palm Reed, K. M. (2018). The impact of experiential avoidance and event centrality in trauma-related rumination and posttraumatic stress. *Behavior Modification*, 42(6), 815-837. <https://doi.org/10.1177/0145445517747287>
Caviccholi, M., Scalabrini, A., Northoff, G., Mucci, C., Ogliari, A., & Maffei, C. (2021). Dissociation and emotion regulation strategies: A meta-analytic review. *Journal of psychiatric research*, 143, 370-387. <https://doi.org/10.1016/j.jpsychires.2021.09.011>
Chogle, A. (2024). Common gastrointestinal conditions in pediatrics. In *Pediatric Psychogastroenterology* (pp. 35-52). Routledge. <https://doi.org/10.4324/9781003308683-4>
Coleman, J. C. (2022). The nature of adolescence. In *Youth Policy in the 1990s* (pp. 8-27). Routledge. <https://doi.org/10.4324/9781003343042-2>
Derakhshan Jan, A., Haqayeq, S. A., Afshar Zanjani, H., & Adibi, P. (2022). The Effectiveness of Acceptance and Commitment Therapy on Quality of Life and Type D Personality Traits in Patients with Ulcerative Colitis. *Behavioral Sciences Research Journal*, 20(3), 425-437. <https://doi.org/10.52547/rbs.20.3.425>
Derakhshan Shahreabad, H., Bayazi, M., Zafari, Z., Teimouri, S., & Rajabzadeh, F. (2018). The Impact of Lazarus's Multimodal Therapy on Symptoms of Depression, Anxiety, and Blood Sugar Control in Women with Type 2 Diabetes. *Principles of Mental Health Journal*, 20(4), 249-255. https://jfmh.mums.ac.ir/article_11131_7e388c93db680316f215780ca5c62bf5.pdf
Dong, K., Qi, H., & Zhao, G. (2025). The Relationship Between Co-rumination and Depressive Symptoms: A Systematic Review and Meta-Analysis. *Journal of youth and adolescence*, 1-19. <https://doi.org/10.1007/s10964-025-02140-9>
Donohue, H. E., Modini, M., & Abbott, M. J. (2024). Psychological interventions for pre-event and post-event rumination in social anxiety: A systematic review and meta-analysis. *Journal of anxiety disorders*, 102, 102823. <https://doi.org/10.1016/j.janxdis.2023.102823>
Eskafi Sabat, Z., Ghorban Shiroudi, S., Zarbakhsh Bahri, M. R., & Aminian, K. (2022). The Effectiveness of Mindfulness-Based Cognitive Therapy (MBCT) on Symptom Severity and Quality of Life in Individuals with Irritable Bowel Syndrome (IBS). *Neyshabur University of Medical Sciences*, 10(1 [Issue 34]), 65-77. <https://sid.ir/paper/1124559/en>
Gámez, W., Chmielewski, M., Kotov, R., Ruggero, C., & Watson, D. (2011). Development of a measure of experiential avoidance: the Multidimensional Experiential Avoidance Questionnaire. *Psychological assessment*, 23(3), 692. <https://doi.org/10.1037/a0023242>
Gao, F., & Du, X. (2025). A meta-analysis of rumination and digital addiction. *Personality and individual differences*, 238, 113074. <https://doi.org/10.1016/j.paid.2025.113074>
Ghasemi Jobaneh, R., Soudani, M., & Mehrabizadeh Honarmand, M. (2023). Development of an Intervention Program Based on the Personality Strengths of Recovered Addicts and Its Effectiveness on Experiential Avoidance, Happiness, and Marital Intimacy. *Social Work Quarterly Journal*, 12(4), 37-45. https://socialworkmag.ir/browse.php?a_id=887&sid=1&slc_1ang=en
Hayes-Skelton, S. A., & Eustis, E. H. (2020). Experiential avoidance. In *Clinical handbook of fear and anxiety: Maintenance processes and treatment mechanisms* (pp. 115-131). American Psychological Association. <https://doi.org/10.1037/0000150-007>

- Hojatkah, S. M., Mesbah, I., & Parvaneh, A. (2021). Effectiveness of Group Counseling based on Lazarus Multimodal Approach on Psychological Well-being of Male Students. *Journal of counseling research*, 20(78). <https://doi.org/10.18502/qjcr.v20i78.6786>
- Iranizadeh, J., Zarei Mahmoudabadi, H., Vaziri, S., & Afshani, S. A. (2020). Development and Effectiveness of a Local Model Based on Lazarus's Theory and the Theory of Planned Behavior for Strengthening Family Foundations. *Health Research Journal*, 9(2), 119-128. https://jhr.ssu.ac.ir/browse.php?a_id=618&sid=1&slc_lang=en
- Jafari, S., & Johari, F. (2023). Effectiveness of Intensive Short-Term Dynamic Psychotherapy on Alexithymia, Defense Styles, and Ego Strength in Patients with Irritable Bowel Syndrome: A Semi-Experimental Study. *Rafsanjan University of Medical Sciences Scientific Journal*, 22(3), 243-258. <https://doi.org/10.52547/jrums.22.3.4>
- Karimian, Z., Haqayeq, S. A., Emami Najafi Dehkordi, S. M. H., & Raeisi, M. (2021). Comparison of the Effectiveness of Transdiagnostic Treatment and Acceptance and Commitment Therapy on Emotion Regulation and Illness Perception in Patients with Irritable Bowel Syndrome. *Behavioral Sciences Research Journal*, 19(3), 477-488. <https://doi.org/10.52547/rbs.19.3.477>
- Lazarus, A. A. (2005). Multimodal therapy. In *Handbook of psychotherapy integration* (pp. 105-120). <https://doi.org/10.1093/med:psych/9780195165791.003.0005>
- Lazarus, A. A. (2006). *Brief but comprehensive psychotherapy: The multimodal way*. Springer Publishing Company. <https://doi.org/10.1891/9780826196842>
- Lazarus, A. A., & Abramovitz, A. (2004). A multimodal behavioral approach to performance anxiety. *Journal of Clinical Psychology*, 60(8), 831-840. <https://doi.org/10.1002/jclp.20041>
- Mirzadeh, B., & Taher, M. (2022). Evaluation of the effectiveness of Lazarus multidimensional treatment on self-esteem and compromise of children with separation anxiety disorder. *Journal of Educational Psychology Studies*, 19(46), 99-85. https://jeps.usb.ac.ir/article_6756.html?lang=en
- Nazari, F., Gharaei, B., & Zahedi Tajrishi, K. (2022). Investigating the Mediating Role of Emotional Dysregulation, Experiential Avoidance, and Rumination in the Relationship Between Emotional Schemas and Obsessive-Compulsive Symptoms. *Iranian Journal of Psychiatry and Clinical Psychology (Andisheh and Raftar)*, 28(4), 466-479. <https://doi.org/10.32598/ijpcp.28.4.4377.1>
- Nolen-Hoeksema, S., & Morrow, J. (1991). A prospective study of depression and posttraumatic stress symptoms after a natural disaster: The 1989 Loma Prieta earthquake. *Journal of personality and social psychology*, 61(1), 115-121. <https://doi.org/10.1037/0022-3514.61.1.115>
- Noori, H. R., Ansari Shahidi, M., Rah Nejat, A. M., Raeisi, M., & Khanzadeh, M. (2023). Comparison of the Effectiveness of Mindfulness Therapy and Covert Exposure Therapy on the Severity of Symptoms in Patients with Irritable Bowel Syndrome. *Health System Research Journal*, 19(1), 52-60. https://www.researchgate.net/publication/370131923_Comparison_of_the_Effectiveness_of_Mindfulness_Therapy_and_Interoceptive_Exposure_on_Symptom_Severity_of_Patients_with_Irritable_Bowel_Syndrome
- Rose, A. J. (2021). The costs and benefits of co-rumination. *Child Development Perspectives*, 15(3), 176-181. <https://doi.org/10.1111/cdep.12419>
- Silvers, J. A. (2022). Adolescence as a pivotal period for emotion regulation development. *Current opinion in psychology*, 44, 258-263. <https://doi.org/10.1016/j.copsyc.2021.09.023>
- Sisk, L. M., & Gee, D. G. (2022). Stress and adolescence: Vulnerability and opportunity during a sensitive window of development. *Current opinion in psychology*, 44, 286-292. <https://doi.org/10.1016/j.copsyc.2021.10.005>
- Timmer, A. (2023). Epidemiology of Digestive Diseases. In *Handbook of Epidemiology* (pp. 1-45). Springer New York. https://doi.org/10.1007/978-1-4614-6625-3_49-1