

RESEARCH ARTICLE

Predicting Perfectionism in Adolescent Girls Based on Mindfulness and Cognitive Emotion Regulation

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ABSTRACT

This study aimed to understand the predictive role of mindfulness and cognitive emotion regulation in perfectionism among adolescent girls. The present study employed a descriptive-correlational research design. The statistical population comprised all female adolescents in Zahedan in 2024. As the study sample, 159 individuals were selected by a two-stage cluster design. The research tools were the Perfectionism Inventory (PI), the Five Facet Mindfulness Questionnaire (FFMQ), and the Cognitive Emotion Regulation Questionnaire (CERQ). Data were analyzed using SPSS version 27. The results showed that there was a significant correlation between aware actions ($r = 0.227, p = 0.004$), non-judgmental inner experience ($r = 0.174, p = 0.029$), and maladaptive cognitive emotion regulation strategies ($r = 0.335, p < 0.001$) with perfectionism. Moreover, maladaptive strategies predicted 11.2% of the variance of perfectionism. Overall, the findings indicated that none of the mindfulness facets significantly predicted perfectionism. In contrast, the use of maladaptive cognitive emotion regulation strategies was significantly associated with perfectionism and served as an effective predictor of it. Therefore, based on the findings, in designing educational and therapeutic programs for adolescents with perfectionistic tendencies, it is important to consider the theoretical foundation of the approaches, whether they are based on mindfulness or on cognitive emotion regulation.

Introduction

Perfectionism is the tendency to strive for perfection and evaluate, judge, and define individuals according to high standards determined by themselves and society (Fallahchai et al., 2019). Additionally, perfectionism can be deconstructed into behavioral, emotional, and cognitive correlates, resulting in distinct profiles such as constructive, motivated, obsessive, and non-perfectionist (Newman et al., 2019). Perfectionism is a multidimensional personality construct with various components. One key element is socially prescribed perfectionism, which represents perceived social pressures and expectations to be perfect (Flett et al., 2016) and is associated with neuroticism, low agreeableness, and low extraversion (Smith et al., 2019). Another component of perfectionism is personal standards, which involve setting high personal standards and striving for excellence (Flett et al., 2022). This self-oriented perfectionism correlates with conscientiousness (Smith et al., 2019). Perfectionistic concerns correlate strongly with anxiety, depression, and obsessive-compulsive disorder (OCD) symptoms (Callaghan et al., 2024). In educational environments, perfectionistic worries can intensify test-related anxiety, whereas balanced perfectionistic efforts may promote self-regulated learning (Ahmadi et al., 2025). Perfectionistic efforts can be beneficial as long as they are not paired with an overwhelming fear of making mistakes or harsh self-criticism (Stoeber & Otto, 2006). Self-oriented perfectionism is linked to lower mindfulness and self-compassion levels, as the need for perfection hinders the ability to be non-judgmentally present, which over time contributes to heightened anxiety and depressive symptoms (Awad et al., 2022; Tobin & Dunkley, 2021). Flett et al. (2021) also confirm that socially prescribed perfectionists often struggle with mindfulness due to their tendency to self-criticize and meet others' expectations. Meanwhile, Manova & Khoury (2023) demonstrate that perfectionism had a positive relationship with the novelty-seeking and novelty-producing facets of mindfulness. In many aspects, mindfulness is a concept that stands in contrast to common views about perfectionism and the typical image of perfectionist individuals (Flett et al., 2021). For this reason, some studies have shown that even after mindfulness-based interventions, perfectionistic traits tend to persist. Vidic & Cherup (2020) showed that perfectionists continued to score high on perfectionism dimensions even after undergoing a mindfulness-based intervention. Similarly, in the study by Wimberley et al. (2016), although the mindfulness intervention reduced levels of perfectionism, the mean level of trait perfectionism remained high.

Mindfulness is a term that refers to awareness, concentration, or remembrance. It combines emotional and attentional training regimes that cultivate physical and psychological well-being and improve emotional regulation (Dobri et al., 2023). It is characterized by present-moment focus, attention to internal and external phenomena, and non-judgmental acceptance (Dane, 2015). Mindfulness is a state of consciousness characterized by deliberate attention, non-judgmental monitoring of experience, self-inquiry, nonattachment, and decentering and has cognitive and mental health benefits (Diaz, 2022; Mahlo & Windsor, 2021). Mindfulness is considered an instrument that empowers

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individuals for health promotion and education, increasing health literacy and decision-making (Amaral & Pinheiro, 2022). Mindfulness-based interventions can enhance cognitive emotion regulation and self-regulation (Guendelman et al., 2017; Raugh & Strauss, 2023). Additionally, different adaptive cognitive emotion regulation strategies were associated with differences in mindfulness (Kashefinshabouri et al., 2021). Mindfulness meditation enhances emotional regulation by fostering greater attention control and self-awareness, leading to significant improvements in emotional regulation (Mursaleen et al., 2024).

Cognitive emotion regulation involves managing emotions through cognitive strategies (Ferrandez-Mas et al., 2023). It involves using specific strategies to regulate and control emotions in different situations. These strategies can be adaptive or maladaptive (Delgado et al., 2023), such as rumination, thought suppression (Aldao & Nolen-Hoeksema, 2010), self-blame, catastrophizing, positive reappraisal (Garnefski et al., 2002), distraction, and labeling (Moyal et al., 2014). There is a core brain network for this process, including the prefrontal, cingulate, and temporal regions (Kohn et al., 2014). Cognitive emotion regulation is essential for maintaining emotional well-being and quality of life in various populations. Older adults tend to engage with emotional stimuli, which aids in processing and supports emotional memory for future regulation attempts (Gronney & English, 2023). Cognitive emotion regulation strategies can also evaluate the risk of developing emotional disorders and define individuals' coping styles (Bhatti et al., 2023). Reappraisal, a key strategy, involves reinterpreting situations to alter emotional impact (Ochsner & Gross, 2008) and regulate negative emotions (Haijuan et al., 2022). A study on adolescents found that high perfectionism was associated with greater attention to negative mood states, suggesting a potential risk for maladaptive emotional self-regulation strategies such as rumination (Tng & Yang, 2021), lower cognitive flexibility (Hayatbini et al., 2021), lower adaptive cognitive emotion regulation, lower coping (Castro et al., 2017), maladaptive emotion regulation strategies, and poor emotion regulation (Malivoire et al., 2019). Similarly, Vois and Damian's (2020) study on adolescents showed that socially prescribed perfectionists have difficulties in emotion regulation. Also, difficulties in emotion regulation are among the strongest predictors of perfectionism (Dobos et al., 2021). This aligns with findings from Sohrabi et al. (2023), who indicate that individuals struggling with emotion regulation are more likely to develop perfectionistic tendencies. Similarly, Youn & Lee (2022) demonstrate that emotion regulation not only influences the degree but also the type of perfectionistic behavior exhibited in performance contexts.

In today's educational context, adolescents are increasingly exposed to academic and parental pressures to achieve high levels of performance; such pressures often foster academic perfectionism. Maladaptive perfectionism, as a significant personality trait, can have substantial effects on the academic and professional future of adolescents. Individuals exhibiting this form of perfectionism often devote excessive time and energy to achieving unrealistic standards, which may lead to increased anxiety, burnout, self-criticism, and decreased overall performance. In recent years, mindfulness and cognitive emotion regulation have been recognized as key components in understanding and enhancing psychological well-being. These constructs form the theoretical foundation of many contemporary therapeutic approaches. Moreover, each of them has proven effective in different aspects of mental health. Therefore, examining the connections between perfectionism, cognitive emotion regulation, and mindfulness can provide valuable insights into the psychological adaptation of adolescents. Understanding these relationships may contribute to the development of effective intervention strategies aimed at managing perfectionistic tendencies and promoting emotional well-being in this population. Therefore, the present study aims to understand the predictive role of mindfulness and cognitive emotion regulation in perfectionism among adolescent girls.

Method

The present study employed a descriptive-correlational research design. The statistical population comprised all female adolescents in Zahedan in 2024. To determine the research sample, using Cochran's formula, a minimum sample size of 150 participants was established. Through a two-stage cluster sampling method, two schools were initially selected. Then, several classes were chosen from each school, and the questionnaires were distributed among adolescent girls. In total, 196 questionnaires were collected. Based on the questionnaire's mean score (145) and the standard deviation of the obtained scores, three levels of perfectionism (low, moderate, and high) were identified. Participants with moderate and high levels of perfectionism were selected for further analysis. Accordingly, a total of 159 questionnaires remained for the final analysis.

Instruments

The Perfectionism Inventory (PI): The Perfectionism Inventory (PI) was developed by Hill et al. (2004) and consists of 59 items and 8 subscales. In the process of standardizing the inventory for an Iranian sample, 58 items and 6 of the original subscales, such as Interpersonal Sensitivity (IS), Striving for Excellence (SE), Organization (O), Perceived Parental Pressure (PPP), Planfulness (P), and High Standards for Others (HSO), were confirmed. The items are rated on a 4-point Likert scale, with total scores ranging from 58 to 232. Higher scores indicate a higher level of perfectionism. To assess the validity of the original version, the total perfectionism score was examined with obsessive-compulsive symptoms, psychiatric disorders, and fear of negative evaluation. For the validation of the Iranian version, the Perfectionism Inventory was compared with the Frost Multidimensional Perfectionism Scale (FMPS) and the Multidimensional Perfectionism Scale (MPS). The results indicated positive correlations between these instruments. The Cronbach's alpha coefficients for the original subscales ranged from 0.83 to 0.91. In the Iranian version, the overall Cronbach's alpha coefficient was reported to be 0.92, indicating high internal consistency (Hill et al., 2004; Samaei et al., 2015).

Five Facet Mindfulness Questionnaire (FFMQ): FFMQ is a 39-item self-assessment scale with five components: observation, description, aware actions, non-judgmental inner experience, and non-reactivity. To assess mindfulness, the individual must indicate whether they agree or disagree with each statement on a 5-point Likert Scale. The scale ranges from 1 (never or very rarely) to 5 (often or always), resulting in a total score of 39 to 195. Each subscale score is obtained by summing the scores of its items, with higher scores indicating a greater level of mindfulness. For construct reliability, the questionnaire showed positive correlations with emotional intelligence, openness to experience, and self-compassion, and negative correlations with alexithymia, dissociation, psychological symptoms, neuroticism, thought suppression, absent-mindedness, experiential avoidance, and difficulties in emotion regulation. The convergent validity of the Iranian version of the Mindfulness Questionnaire was supported by its significant correlations with Schering's emotional intelligence questionnaire, the NEO Five-

Factor Inventory (NEO-FFI), the Symptom Checklist-90 (SCL-90), and the Psychological Well-Being Questionnaire, indicating that the instrument possesses satisfactory convergent validity. The Cronbach's alpha coefficients ranged from 0.75 to 0.91 in the original version. For the Iranian sample, alpha coefficients of 0.55 to 0.83 were reported (Ahmadvand et al., 2013; Baer et al., 2006).

Cognitive Emotion Regulation Questionnaire Short Version (CERQ-short): CERQ-short is an 18-item self-report measure including nine scales: self-blame, other-blame, rumination, catastrophizing, positive refocusing, planning, positive reappraisal, putting into perspective, and acceptance. Each item is rated on a 5-point Likert scale from 1 (Never) to 5 (Always). The score for each subscale is calculated by summing the scores of its two corresponding items, resulting in a total score ranging from 2 to 10. A higher score on each subscale indicates a greater use of that specific cognitive strategy. In CERQ-short, cognitive emotion regulation strategies are categorized into two broad groups: adaptive strategies and maladaptive strategies. The reliability of the questionnaire was assessed and confirmed through its correlations with the depression and anxiety subscales of the SCL-90. To examine the reliability of the Persian version, Pearson correlations were calculated with the Depression, Anxiety, and Stress Scales (DASS) and the Mental Health Scale. The results indicated significant negative correlations between the adaptive subscales and measures of depression, anxiety, stress, and psychological distress, as well as significant positive correlations with psychological well-being. These findings support the convergent and discriminant reliability of the CERQ. The Cronbach's alpha coefficients for the CERQ-short subscales ranged from 0.62 to 0.85, and for the Persian version ranged from 0.78 to 0.93 (Besharat & Bazzazian, 2014; Garnefski & Kraaij, 2006).

Procedure and Data Analysis

Initially, an introduction letter was obtained from the University of Sistan and Baluchestan for referral to selected schools, and the necessary coordination with the schools was carried out. Subsequently, the research objectives were explained to the adolescent girls, and those who volunteered to participate were provided with instructions on how to complete the questionnaire. After collecting valid questionnaires, the data were analyzed using SPSS-27, employing Pearson's correlation coefficient and regression analysis.

Results

This study included adolescent female students between the ages of 13 and 18, with a mean age of 16.17 years, selected from both lower and upper secondary school levels. Of the total sample, 48 (30.2%) students were in lower secondary school, and 111 (69.8%) were in upper secondary school. Table 1 presents the descriptive statistics (mean and standard deviation) for the study variables, including perfectionism, mindfulness facets, and cognitive emotion regulation strategies. The results indicate that the sample reported relatively high levels of perfectionism (M = 163.73, SD = 20.36). Among the mindfulness components, observation (M = 27.76, SD = 6.41) had higher mean scores compared to description (M = 17.44, SD = 3.33). For cognitive emotion regulation strategies, participants scored higher on adaptive strategies (M = 31.70, SD = 7.23) than maladaptive strategies (M = 23.67, SD = 6.15).

Also, Table 1 reports the Pearson correlation coefficients among perfectionism, mindfulness facets, and cognitive emotion regulation strategies. Among the five mindfulness subscales, only aware actions (r = 0.227, p = 0.004) and non-judgmental inner experience (r = 0.174, p = 0.029) showed significant positive correlations with perfectionism. Regarding cognitive emotion regulation strategies, a significant positive correlation of medium magnitude was found between maladaptive strategies and perfectionism (r = 0.335, p < 0.001), suggesting that individuals with higher perfectionism are more likely to employ maladaptive strategies.

Table 1. Descriptive data and Pearson correlation coefficients among perfectionism, mindfulness facets, and cognitive emotion regulation strategies

Variables		Mean	Std. Deviation	P	O	D	AA	NJIE	NR	AS	MS
perfectionism		163.73	20.36	1.000							
	O	27.76	6.41	0.027	1.000						
	D	17.44	3.33	0.016	0.450	1.000					
mindfulness	AA	23.48	6.46	0.227	-0.030	.032	1.000				
	NJIE	24.94	5.97	0.174	0.432	0.245	0.376	1.000			
	NR	21.23	4.24	0.071	0.453	0.503	-0.012	0.293	1.000		
cognitive emotion regulation strategies	AS	31.70	7.23	0.071	0.322	0.328	-0.021	0.229	0.246	1.000	
	MS	23.67	6.15	0.335	0.209	0.131	0.370	0.408	0.025	0.338	1.000

Perfectionism (P), Observation (O), Description (D), Aware Actions (AA), Non-Judgmental Inner Experience (NJIE), Non-Reactivity (NR), Adaptive Strategies (AS), Maladaptive Strategies (MS)

A stepwise multiple regression analysis, as represented in Table 2, was conducted to determine whether cognitive emotion regulation strategies and mindfulness facets could predict the degree of perfectionism. Among all predictors, only maladaptive strategies emerged as a significant predictor in the final model. The regression coefficient for maladaptive strategies was positive and significant ($\beta = 0.335, p <$

0.001), indicating that higher use of maladaptive cognitive emotion regulation strategies is associated with higher levels of perfectionism. The overall model was statistically significant ($F = 19.863, p < 0.001$), and explained approximately 11.2% of the variance in perfectionism scores ($R^2 = 0.112$).

Table 2. Results of stepwise multiple regression analysis predicting perfectionism

Predictor	B	Std. Error	Beta	t	Sig.	R ²	Adjusted R ²	F	ΔR^2	Sig. F Change
Constant	137.468	6.088		22.578	< 0.001	0.112	0.107	19.863	0.112	< 0.001
Maladaptive Strategies	1.110	0.249	0.335	4.457	< 0.001					

Discussion and Conclusion

This study analyzed the predictive role of mindfulness and cognitive emotion regulation in perfectionism among adolescent girls. First, the findings indicated that there were no significant associations between mindfulness dimensions and perfectionism. Also, none of the mindfulness subscales significantly predicted perfectionism. In this regard, [Vidic & Cherup \(2020\)](#) and [Wimberley et al. \(2016\)](#) showed that perfectionists continued to score high on perfectionism dimensions even after undergoing a mindfulness-based intervention. However, [Awad et al. \(2022\)](#) and [Tobin & Dunkley \(2021\)](#) found that self-oriented perfectionism is associated with lower mindfulness. These studies also demonstrated that socially prescribed perfectionists exhibited higher levels of mindfulness. In contrast, [Flett et al. \(2021\)](#) demonstrated that perfectionism, particularly socially prescribed perfectionism, is associated with lower mindfulness due to excessive self-criticism and external pressure. Based on the studies referenced, perfectionism has multiple dimensions, and evidence suggests that mindfulness may relate differently to each of its dimensions. Therefore, the results of this study might be influenced by the use of a total perfectionism score, which could mask the specific associations related to each dimension. Mindfulness is primarily a skill that can be developed, focusing on the regulation of attention and acceptance of experiences. In contrast, perfectionism is a more stable personality trait rooted in deep-seated beliefs and developmental experiences. Mindfulness emphasizes present-moment attention, acceptance of experience, and non-judgmental awareness; in contrast, perfectionism reflects a broad pattern of identity-related beliefs, internalized standards, and rigid expectations. Overall, Research on the relationship between perfectionism and mindfulness, whether measured by total scores or specific dimensions, has shown varied and sometimes inconsistent results. Therefore, future studies should focus on investigating these constructs more thoroughly, emphasizing their distinct dimensions.

The results of this study indicate that maladaptive cognitive emotion regulation strategies can significantly predict perfectionism among adolescents. This finding aligns with prior research suggesting that problems in emotion regulation are significant predictors of perfectionism ([Dobos et al., 2021](#)). [Sohrabi et al. \(2023\)](#) also confirm this finding and reported that difficulties in emotion regulation are associated with perfectionist traits. Moreover, [Youn and Lee \(2022\)](#) also indicate that emotion regulation can impact the type of perfectionism, in addition to predicting it. Strategies such as rumination, self-blame, and catastrophizing increase individuals' focus on threat, mistakes, and negative outcomes, trapping them in cycles of self-critical processing and heightened negative emotions. The ongoing experience of these negative emotional states, particularly anxiety and worry, can lead adolescents to adopt increasingly rigid and high-performance standards as a means of preventing further emotional discomfort. Moreover, frequent reliance on maladaptive strategies is associated with reduced cognitive flexibility and difficulties in employing reappraisal, which promotes all-or-nothing thinking and the interpretation of mistakes as signs of personal inadequacy. In this context, contingent self-worth develops, leading adolescents to evaluate their value based on flawless performance. These processes create conditions that not only facilitate the development of perfectionism but also contribute to its persistence over time. Although maladaptive cognitive emotion can exacerbate maladaptive forms of perfectionism, perfectionism is a multifactorial phenomenon. Other critical factors, including maladaptive schemas, parenting, social pressures, sensitivity to negative evaluation, and personality traits, also play a central role in its development and maintenance. Therefore, the limited role of cognitive emotion regulation in predicting perfectionism suggests that while these cognitive patterns influence the emergence and persistence of perfectionism, they are not the primary determinants and represent only one of several mechanisms underlying this construct.

Overall, the findings indicated that none of the mindfulness facets significantly predicted perfectionism. In contrast, the use of maladaptive cognitive emotion regulation strategies was significantly associated with perfectionism and served as an effective predictor of it. These findings suggest that while mindfulness may not directly account for variations in perfectionism, maladaptive cognitive emotion regulation strategies may play a critical role in the development and maintenance of perfectionistic tendencies. Since perfectionism is associated with anxiety, depression, and obsessive-compulsive disorder, it is important to identify perfectionist adolescents and provide them with appropriate educational or therapeutic programs. Specifically, for mindfulness-based or emotion regulation interventions targeting perfectionist individuals. Additionally, emphasizing self-acceptance and the establishment of reasonable personal standards can contribute to enhancing the mental well-being and quality of life of perfectionist individuals. Nevertheless, this study has certain limitations. One of the limitations of this study is that it focused only on adolescent girls, which limits the ability to generalize the findings to other genders. Additionally, using self-report questionnaires to assess the variables may not fully capture all their dimensions and details. Therefore, future studies are encouraged to employ a broader range of methodologies, such as in-depth interviews or neuroscientific approaches, to provide a more comprehensive understanding of the relationship between perfectionism, mindfulness, and cognitive emotion regulation.

References

- Ahmadi, T., Finch, W. H., Helsper, C. A., & Cassady, J. (2025). Relationships Between Dimensions of Perfectionism and Perceived Test Threat. *Psychology in the Schools*, 62(5), 1332-1354. <https://doi.org/10.1002/pits.23397>
- Ahmadvand, Z., Heydarinasab, L., & Shairi, M.R. (2013). An investigation of the validity and reliability of psychometric characteristics of five facet mindfulness questionnaire in Iranian non-clinical samples. *International Journal of Behavioral Sciences*, 7(3), 229-237. https://www.behavsci.ir/article_67834.html

- Aldao, A., & Nolen-Hoeksema, S. (2010). Specificity of cognitive emotion regulation strategies: a transdiagnostic examination. *Behaviour Research and Therapy*, 48(10), 974–983. <https://doi.org/10.1016/j.brat.2010.06.002>
- Amaral, P., & Pinheiro, D. (2022). Mindfulness: Instrumento para a promoção da saúde e do bem-estar na população portuguesa e desenvolvimento da literacia em Saúde. *JIM — Jornal De Investigação Médica*, 3(2), 57–76. <https://doi.org/10.29073/jim.v3i2.664>
- Awad, E., Hallit, S., & Obeid, S. (2022). Does self-esteem mediate the association between perfectionism and mindfulness among Lebanese university students?. *BMC Psychology*, 10(1), 256. <https://doi.org/10.1186/s40359-022-00964-9>
- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, 13(1), 27–45. <https://doi.org/10.1177/1073191105283504>
- Besharat, M., & Bazzazian, S. (2014). Psychometric properties of the cognitive emotion regulation questionnaire in a sample of Iranian population. *Advances in Nursing and Midwifery*, 24(84), 61-70. <https://sid.ir/paper/496015/fa> [In Persian]
- Bhatti, R. J., Fahd, S., & Rehman, S. ur. (2023). Exploring the Role of Cognitive Emotion Regulation Strategies on the Quality of Life of HIV Patients: Role of Cognitive Emotion Regulation Strategies. *Pakistan Journal of Health Sciences*, 4(05), 248–252. <https://doi.org/10.54393/pjhs.v4i05.777>
- Callaghan, T., Greene, D., Shafraan, R., Lunn, J., & Egan, S. J. (2024). The relationships between perfectionism and symptoms of depression, anxiety and obsessive-compulsive disorder in adults: a systematic review and meta-analysis. *Cognitive Behaviour Therapy*, 53(2), 121–132. <https://doi.org/10.1080/16506073.2023.2277121>
- Castro, J., Soares, M. J., Pereira, A. T., & Macedo, A. (2017). Perfectionism and negative/positive affect associations: the role of cognitive emotion regulation and perceived distress/coping. *Trends in Psychiatry and Psychotherapy*, 39(2), 77–87. <https://doi.org/10.1590/2237-6089-2016-0042>
- Dane, E. (2015). Mindfulness and Performance: Cautionary Notes on a Compelling Concept. *Industrial and Organizational Psychology*, 8(4), 647–652. <https://doi.org/10.1017/iop.2015.94>
- Delgado, B., Amor, P. J., Domínguez-Sánchez, F. J., & Holgado-Tello, F. P. (2023). Relationship between adult attachment and cognitive emotional regulation style in women and men. *Scientific Reports*, 13(1), 8144. <https://doi.org/10.1038/s41598-023-35250-0>
- Diaz, F. M. (2022). 65Mindfulness. In G. E. McPherson (Ed.), *The Oxford Handbook of Music Performance* (Vol. 2). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780190058869.013.4>
- Dobos, B., Pikó, B., & Mellor, D. (2021). What makes university students perfectionists? the role of childhood trauma, emotional dysregulation, academic anxiety, and social support. *Scandinavian Journal of Psychology*, 62(3), 443-447. <https://doi.org/10.1111/sjop.12718>
- Dobri, L. M., Voinea, A. C., Marcu, B., Elkan, E., Rădulescu, L., Nechita, P., (2023). Mindfulness: a psychotherapeutic method of acceptance and centering of the mental framework. *Psychiatry*, 12, 1-6. <https://www.doi.org/10.35630/2022/12/psy.ro.29>
- Fallahchahi, R., Fallahi, M., & Moazen Jami A. (2019). Well-being and perfectionism in students: Adaptive versus maladaptive. *Iranian Evolutionary Educational Psychology*. 1(3), 222-230. <http://dx.doi.org/10.29252/ieepj.1.3.222>
- Ferrández-Mas, J., Moreno-Amador, B., Marzo, J. C., Falcó, R., Molina-Torres, J., Cervin, M., & Piqueras, J. A. (2023). Relationship between cognitive strategies of emotion regulation and dimensions of obsessive-compulsive symptomatology in adolescents. *Children*, 10(5), 803. <https://doi.org/10.3390/children10050803>
- Flett, G. L., Hewitt, P. L., Nepon, T., Sherry, S. B., & Smith, M. (2022). The destructiveness and public health significance of socially prescribed perfectionism: A review, analysis, and conceptual extension. *Clinical Psychology Review*, 93, 102130. <https://doi.org/10.1016/j.cpr.2022.102130>
- Flett, G. L., Nepon, T., Hewitt, P. L., & Fitzgerald, K. (2016). Perfectionism, components of stress reactivity, and depressive symptoms. *Journal of Psychopathology and Behavioral Assessment*, 38(4), 645-654. <https://doi.org/10.1007/s10862-016-9554-x>
- Flett, G. L., Nepon, T., Hewitt, P. L., & Rose, A. L. (2021). Why Perfectionism Is Antithetical to Mindfulness: a Conceptual and Empirical Analysis and Consideration of Treatment Implications. *International Journal of Mental Health and Addiction*, 19(5), 1625-1645. <https://doi.org/10.1007/s11469-020-00252-w>
- Garnefski, N., & Kraaij, V. (2006). Cognitive emotion regulation questionnaire - development of a short 18-item version (CERQ-short). *Personality and Individual Differences*, 41(6), 1045–1053. <https://doi.org/10.1016/j.paid.2006.04.010>
- Garnefski, N., Van Den Kommer, T., Kraaij, V., Teerds, J., Legerstee, J., & Onstein, E. (2002). The relationship between cognitive emotion regulation strategies and emotional problems: Comparison between a clinical and a non-clinical sample. *European Journal of Personality*, 16(5), 403-420. <https://doi.org/10.1002/per.458>
- Grownay, C. M., & English, T. (2023). Age and cognitive ability predict emotion regulation strategy use. *The Journals of Gerontology*, 78(6), 987–997. <https://doi.org/10.1093/geronb/gbad021>
- Guendelman, S., Medeiros, S., & Rampes, H. (2017). Mindfulness and Emotion Regulation: Insights from Neurobiological, Psychological, and Clinical Studies. *Frontiers in Psychology*, 8, 220. <https://doi.org/10.3389/fpsyg.2017.00220>
- Haijuan, Y., Qi, W., & Zhaoqing, L. (2022). Cognitive reappraisal inventiveness in emotion regulation. *Xinli Kexue Jinzhan*, 30(3), 601-612. <https://www.doi.org/10.3724/sp.j.1042.2022.00601>
- Hayatbini, N., Knauff, K., & Kalia, V. (2021). Cognitive reappraisal moderates the relationship between perfectionism and cognitive flexibility. *Journal of Clinical Psychology*, 77(7), 1685–1699. <https://doi.org/10.1002/jclp.23124>
- Hill, R. W., Huelsman, T. J., Furr, R. M., Kibler, J., Vicente, B. B., & Kennedy, C. (2004). A new measure of perfectionism: The perfectionism inventory. *Journal of Personality Assessment*, 82(1), 80-91. https://doi.org/10.1207/s15327752jpa8201_13

- Kashefinishabouri, J., Eftekhar Saadi, Z., Pasha, R., Heidari, A., & Makvandi, B. (2021). The effect of mindfulness-based cognitive therapy and emotion-regulation training on rumination and social anxiety in teenagers prone to addiction. *Journal of Occupational Health and Epidemiology*, 10(1), 1-11. <https://www.sid.ir/paper/1003004/en>
- Kohn, N., Eickhoff, S. B., Scheller, M., Laird, A. R., Fox, P. T., & Habel, U. (2014). Neural network of cognitive emotion regulation--an ALE meta-analysis and MACM analysis. *NeuroImage*, 87, 345-355. <https://doi.org/10.1016/j.neuroimage.2013.11.001>
- Mahlo, L., & Windsor, T. D. (2021). Older and more mindful? Age differences in mindfulness components and well-being. *Aging & Mental Health*, 25(7), 1320-1331. <https://doi.org/10.1080/13607863.2020.1734915>
- Malivoire, B. L., Kuo, J. R., & Antony, M. M. (2019). An examination of emotion dysregulation in maladaptive perfectionism. *Clinical Psychology Review*, 71, 39-50. <https://doi.org/10.1016/j.cpr.2019.04.006>
- Manova, V., & Khoury, B. (2023). The Relationship Between Mindfulness and Perfectionism in University Students During Emerging Adulthood. *Emerging Adulthood*, 11(4), 828-844. <https://doi.org/10.1177/21676968221126799>
- Moyal, N., Henik, A., & Anholt, G. E. (2014). Cognitive strategies to regulate emotions-current evidence and future directions. *Frontiers in Psychology*, 4, 1019. <https://doi.org/10.3389/fpsyg.2013.01019>
- Mursaleen, M., Khan, B., Sohail, S., Batool, Z., Khan, A., & Saeed, H. (2024). The Psychological Benefits of Mindfulness Meditation on Emotional Regulation. *Journal of Policy Research*, 10(3) 306-311. <https://doi.org/10.61506/02.00347>
- Newman, B.N., Strickler, J.G., O'Brien, C., Lui, T.G., & Lynch, M.P. (2019). Deconstructing perfectionism in college students: Patterns of behavior, emotion, and cognition. *Personality and Individual Differences*. 145, 106-111. <https://doi.org/10.1016/J.PAID.2019.03.030>
- Ochsner, N. K., & Gross, J. J. (2008). Cognitive emotion regulation insights from social cognitive and affective neuroscience. *Current Directions in Psychological Science*, 17(2), 153-158. <http://dx.doi.org/10.1111/j.1467-8721.2008.00566.x>
- Raugh, I. M., & Strauss, G. P. (2023). Integrating mindfulness into the extended process model of emotion regulation: The dual-mode model of mindful emotion regulation. *Emotion*, 24 (3), 847. <https://doi.org/10.1037/emo0001308>
- Samaei, S., Hooman, H. A., Tavakoli, M. H., & Bagherian, F. (2015). An investigation of psychometric properties of perfectionism inventory in iranian sample. *Procedia - Social and Behavioral Sciences*, 205, 556-563. <https://doi.org/10.1016/j.sbspro.2015.09.075>
- Smith, M. M., Sherry, S. B., Vidovic, V., Saklofske, D. H., Stoeber, J., & Benoit, A. (2019). Perfectionism and the Five-Factor Model of Personality: A Meta-Analytic Review. *Personality and Social Psychology Review*, 23(4), 367-390. <https://doi.org/10.1177/1088868318814973>
- Sohrabi, M., Bakhtiarpour, S., Sohrabi, F., Saadi, Z. E., & Asgari, P. (2023). Effectiveness of contextual schema therapy for extreme perfectionism and emotion regulation in individuals with perfectionism disorder. *Journal of Clinical Research in Paramedical Sciences*, 12(2), e140511. <https://doi.org/10.5812/jcrps-140511>
- Stoeber, J., & Otto, K. (2006). Positive conceptions of perfectionism: approaches, evidence, challenges. *Personality and Social Psychology Review*, 10(4), 295-319. https://doi.org/10.1207/s15327957pspr1004_2
- Tng, G. Y. Q., & Yang, H. (2021). Interactional effects of multidimensional perfectionism and cognitive emotion regulation strategies on eating disorder symptoms in female college students. *Brain sciences*, 11(11), 1374. <https://doi.org/10.3390/brainsci11111374>
- Tobin, R., & Dunkley, D. M. (2021). Self-critical perfectionism and lower mindfulness and self-compassion predict anxious and depressive symptoms over two years. *Behaviour Research and Therapy*, 136, 103780. <https://doi.org/10.1016/j.brat.2020.103780>
- Vidic, Z., & Cherup, N. (2020). Mindfulness in the classroom: effect of a mindfulness-based relaxation class on college student' stress, resilience, self- efficacy and perfectionism. *College Student Journal*, 53(1), 130-144. <https://psycnet.apa.org/record/2019-17784-013>
- Vois, D., & Damian, L. E. (2020). Perfectionism and emotion regulation in adolescents: A two-wave longitudinal study. *Personality and Individual Differences*, 156, 109756. <https://doi.org/10.1016/j.paid.2019.109756>
- Wimberley, T. E., Mintz, L. B., & Suh, H. (2016). Perfectionism and mindfulness: Effectiveness of a bibliotherapy intervention. *Mindfulness*, 7(2), 433-444. <https://doi.org/10.1007/s12671-015-0460-1>
- Youn, S., & Lee, J. (2022). Emotion regulation mediates the relationship between perfectionism and self-handicapping among dancers. *International Journal of Applied Sports Sciences*, 34(1), 50-60. <https://doi.org/10.24985/ijass.2022.34.1.50>