

A Causal Model of Anxiety Symptoms Based on Perceived Social Support and Difficulties in Emotion Regulation: The Mediating Role of Ego Strength Among Afghan Nationals

Gelareh. Saber Majidi¹, Mahdieh. Salehi^{1*}, Marjan. Jafari Roshan¹

¹ Department of Psychology, CT.C., Islamic Azad University, Tehran, Iran

* Corresponding author email address: Iranpour1000@yahoo.com

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ABSTRACT

Anxiety is one of the most common mental health problems. In addition to emotional factors, supportive resources and individuals' psychological capacities play a determining role in its development and persistence. The present study aimed to evaluate a causal model of anxiety symptoms based on perceived social support and difficulties in emotion regulation, with ego strength as a mediator, among Afghan nationals. This study employed a descriptive-correlational design. The statistical population comprised all Afghan women and men living in Tehran during 2024–2025. From this population, 204 individuals were selected through stratified sampling and completed the State-Trait Anxiety Inventory, the Multidimensional Scale of Perceived Social Support, the Difficulties in Emotion Regulation Scale, and the Ego Strength Scale. The data were analyzed using structural equation modeling in AMOS version 26. The results indicated that the proposed model demonstrated an acceptable fit to the data and explained 47% of the variance in anxiety symptoms, indicating the central role of the variables included in the model in explaining anxiety. Within the structural relationships of the model, perceived social support played a determining role in strengthening ego strength and explained approximately 41% of its variance. In contrast, ego strength had a significant negative effect on anxiety symptoms, whereas difficulties in emotion regulation had a significant positive effect on anxiety. Perceived social support also exerted a significant indirect effect on anxiety symptoms through increased ego strength, while difficulties in emotion regulation exerted a significant indirect effect through reduced ego strength. Overall, the pattern of findings indicates that perceived social support, ego strength, and difficulties in emotion regulation are three central components in explaining anxiety symptoms. These results emphasize the simultaneous importance of external supportive resources and internal psychological capacities in understanding the structure of anxiety among Afghan nationals.

Keywords: anxiety, perceived social support, difficulties in emotion regulation, ego strength, Afghan nationals

1. Introduction

Anxiety symptoms are among the most pervasive manifestations of psychological distress and may appear as persistent worry, physiological arousal, apprehension, tension, fear of adverse events, and difficulty controlling threat-related thoughts. Although a moderate degree of anxiety may serve an adaptive function by preparing individuals to respond to environmental demands, persistent or excessive anxiety can disrupt cognitive functioning, interpersonal relationships, occupational performance, and overall quality of life. Contemporary perspectives increasingly conceptualize anxiety symptoms as the product of complex interactions among emotional, cognitive, interpersonal, and intrapsychic processes rather than as the consequence of a single vulnerability. Evidence from the broader spectrum of anxiety-related conditions, particularly obsessive-compulsive disorder (OCD), demonstrates that anxiety-related symptoms may become chronic, disabling, and resistant to change when maladaptive cognitive processes, emotional dysregulation, and insufficient psychological resources interact over time (Bandelow et al., 2023; Stein et al., 2025; Van Ameringen et al., 2026).

OCD provides an important clinical model for understanding the persistence of anxiety-related symptoms because it is characterized by recurrent distressing thoughts, images, or impulses and repetitive behaviors or mental acts intended to reduce distress or prevent feared outcomes. Although contemporary diagnostic systems distinguish OCD from anxiety disorders, anxiety remains a central component of its clinical presentation and maintenance. International epidemiological evidence indicates that OCD occurs across countries and sociocultural settings and is associated with substantial impairment, delayed recognition, and unmet treatment needs (Stein et al., 2025). International treatment guidelines similarly emphasize that the disorder is frequently chronic and requires careful assessment of symptom severity, functional impairment, comorbidity, treatment history, and psychosocial context (Bandelow et al., 2023; Van Ameringen et al., 2026). Consequently, findings from OCD research are relevant to the study of broader anxiety mechanisms, particularly when the focus is on processes such as difficulty managing emotional experiences, vulnerability to distress, interpersonal resources, and psychological capacities that influence adaptation.

The persistence of anxiety-related symptoms cannot be fully understood merely by identifying their behavioral manifestations. Clinical outcomes vary considerably, even among individuals receiving evidence-based interventions. Definitions of treatment response and remission in adult OCD differ across studies, and improvement in symptom scores does not necessarily indicate full recovery or restoration of functioning (Ramakrishnan et al., 2024). Research on maximizing remission has also shown that a meaningful proportion of individuals retain residual symptoms despite medication and structured cognitive-behavioral therapy (Simpson et al., 2021). These findings suggest that symptom persistence may be associated with psychological mechanisms that are not entirely addressed by standard symptom-focused interventions. Therefore, examining underlying emotional and personality-related capacities may provide a more comprehensive account of why some individuals experience severe or enduring anxiety while others display greater resilience under comparable conditions.

Exposure and response prevention is recognized as one of the principal psychological treatments for OCD and has demonstrated substantial efficacy across randomized clinical trials and routine clinical settings (Ost et al., 2022; Reid et al., 2021). Through repeated confrontation with feared stimuli and prevention of ritualized responses, exposure and response prevention allows anxiety to be experienced without reliance on maladaptive avoidance or neutralizing behaviors. However, clinical response is not uniform. Some individuals refuse treatment, discontinue it prematurely, experience residual symptoms, or fail to achieve remission. Reviews of adult OCD psychotherapy have therefore emphasized the need to investigate mechanisms of change, treatment accessibility, digital delivery, personalization, and interventions for those who do not benefit sufficiently from conventional approaches (Castle et al., 2023). Studies examining the addition of other therapeutic components to exposure and response prevention likewise indicate that emotional, cognitive, motivational, and contextual factors may influence engagement and treatment response (Faustino et al., 2025).

The limitations of standard interventions become particularly apparent among individuals with severe or treatment-resistant symptoms. Pharmacoresistant OCD often requires more intensive, multimodal, or prolonged treatment, and treatment planning must account for cognitive rigidity, avoidance, emotional distress, comorbid conditions, and previous treatment failure (van Roessel et al., 2023;

Vyskocilova et al., 2016). Prospective and long-term studies of intensive inpatient treatment indicate that substantial improvement is possible, but outcomes differ across patients and may depend on their capacity to tolerate distress, engage in treatment, and sustain adaptive responses after discharge (Balachander et al., 2020; Nanjundaswamy et al., 2020). Residential and inpatient cognitive-behavioral programs have also produced meaningful reductions in severe OCD symptoms, although not all participants achieve equivalent benefits (Veale, Naismith, Miles, Childs, et al., 2016; Veale, Naismith, Miles, Gledhill, et al., 2016). These differences reinforce the importance of investigating internal psychological resources that enable individuals to cope with intense emotions, regulate impulses, maintain goal-directed behavior, and preserve psychological coherence under pressure.

High-intensity and concentrated forms of exposure and response prevention further demonstrate the relevance of psychological capacity in confronting anxiety. Concentrated interventions deliver exposure-based treatment within a brief but intensive period and may be effective even for individuals whose symptoms have been difficult to treat (Trent et al., 2025). Nevertheless, insight, readiness for change, tolerance of distress, and the ability to remain engaged with feared experiences may predict both immediate and long-term outcomes (Tjelle et al., 2025). Pharmacological augmentation of intensive exposure has also been investigated, including the use of D-cycloserine to enhance extinction learning; however, treatment findings indicate that improving exposure outcomes involves more than pharmacological facilitation alone (Kvale et al., 2020). Collectively, these studies point to the relevance of enduring psychological capacities that support emotional containment, adaptive coping, realistic appraisal, and sustained engagement with difficult experiences.

One construct that may represent such capacities is ego strength. Rooted in psychoanalytic and ego-psychological traditions, ego strength refers to the individual's capacity to preserve psychological integration, regulate impulses, tolerate frustration, employ adaptive defenses, cope with internal and external conflict, and maintain goal-directed functioning during stressful circumstances. Individuals with stronger ego functioning may be better able to experience anxiety without becoming overwhelmed by it, distinguish internal fears from external realities, delay impulsive responses, and select more adaptive coping strategies. In contrast, reduced ego strength may increase vulnerability to emotional disorganization, rigid defenses, avoidance, and

persistent distress. Although contemporary treatment research often uses terms such as resilience, psychological flexibility, distress tolerance, coping capacity, and emotional regulation rather than ego strength, these concepts overlap in their emphasis on adaptive functioning under psychological pressure.

Cognitive models similarly indicate that anxiety-related symptoms are influenced by how individuals interpret internal events. The inference-based approach to OCD proposes that obsessive doubt may emerge when individuals rely on imagined possibilities rather than direct sensory evidence, thereby becoming absorbed in narratives of potential threat (Aardema et al., 2017). From this perspective, the ability to evaluate reality, maintain cognitive flexibility, and resist maladaptive inferential processes may be related to broader ego capacities. When ego strength is insufficient, intrusive thoughts or emotional reactions may be experienced as intolerable, dangerous, or uncontrollable. Such appraisals can intensify anxiety and reinforce defensive or avoidant responses. Ego strength may therefore function as a psychological mechanism through which emotional and interpersonal resources influence anxiety symptoms.

Difficulties in emotion regulation constitute another central mechanism in the development and persistence of anxiety symptoms. Emotion regulation includes awareness, identification, acceptance, modulation, and contextually appropriate expression of emotional experiences. Difficulties may involve nonacceptance of negative emotions, inability to maintain goal-directed behavior under distress, poor impulse control, limited access to effective regulation strategies, low emotional awareness, and lack of emotional clarity. When individuals are unable to understand or regulate emotional arousal, anxiety may escalate and be maintained through avoidance, suppression, rumination, reassurance seeking, compulsive behavior, or other short-term strategies that reduce distress temporarily but impair long-term adaptation. Comparative research has shown that emotion-focused interventions and exposure-based treatment may affect experiential avoidance, intolerance of uncertainty, and emotion regulation among individuals with OCD (Mirzapour Alamdari et al., 2025). Neuromodulation research has also examined changes in emotion regulation and pathological doubt, further demonstrating the importance of emotional processes in obsessive-compulsive symptoms (Rajaei Moshaei & Rasouli, 2025).

The growing emphasis on emotion regulation is also reflected in acceptance- and mindfulness-based approaches.

Acceptance and commitment therapy seeks to reduce experiential avoidance and increase psychological flexibility by helping individuals remain in contact with difficult thoughts and emotions while acting according to personally meaningful values. A cross-cultural systematic review and meta-analysis has supported the potential utility of acceptance and commitment therapy for OCD, although variation in implementation and study quality indicates the need for continued investigation (Loureiro et al., 2026). A randomized comparison of group-based acceptance and commitment therapy with cognitive-behavioral therapy and exposure and response prevention further suggests that acceptance-based approaches may provide a viable intervention framework for some patients (Nielsen et al., 2025). An Iranian randomized trial likewise found that acceptance and commitment therapy could be compared meaningfully with exposure and response prevention among patients receiving an optimal dose of selective serotonin reuptake inhibitors (Zemestani et al., 2022). Preliminary Iranian evidence has also indicated that group acceptance and commitment therapy may improve outcomes when added to pharmacotherapy (Rohani et al., 2018).

Mindfulness-based cognitive therapy similarly targets maladaptive relationships with thoughts and emotions rather than attempting to eliminate all distressing internal experiences. As an augmentation intervention, mindfulness-based cognitive therapy may help individuals observe intrusive thoughts nonjudgmentally, reduce automatic reactions, and respond to emotional discomfort with greater awareness (Key et al., 2017). A randomized controlled trial among patients with residual symptoms following cognitive-behavioral therapy also demonstrated the clinical relevance of mindfulness-based cognitive therapy in addressing persistent obsessive-compulsive symptoms (Kulz et al., 2019). These findings are important for understanding anxiety because they suggest that the severity and persistence of symptoms may depend not only on the presence of negative emotions but also on the individual's capacity to accept, process, and regulate those emotions. Such capacities may be conceptually integrated within ego strength, which can enable the person to tolerate affective tension without resorting to rigid avoidance or maladaptive defensive responses.

In addition to intrapersonal capacities, perceived social support may be a major protective factor in psychological adjustment. Perceived social support refers to an individual's belief that emotional, informational, and practical assistance is available from family members,

friends, and significant others when needed. The subjective perception of support may be as important as the objective availability of social relationships because individuals' interpretations of interpersonal resources influence their sense of safety, belonging, self-worth, and capacity to manage stress. Supportive relationships may reduce the perceived intensity of threats, facilitate emotional expression, provide alternative interpretations of stressful experiences, and encourage adaptive help-seeking. Conversely, limited or unreliable support may increase isolation, reinforce helplessness, and weaken the individual's ability to regulate distress.

Research on treatment access illustrates the importance of the interpersonal and social environment in the management of anxiety-related conditions. Adults with OCD may encounter barriers such as stigma, inadequate knowledge, uncertainty about available services, concerns about treatment, and difficulty accessing first-line interventions (Bey et al., 2025). Social networks may facilitate recognition of psychological problems and encourage professional help-seeking, whereas unsupportive environments may delay treatment or normalize maladaptive coping. Supportive family members and significant others may also strengthen adherence by assisting individuals in tolerating treatment-related anxiety without reinforcing avoidance or compulsive reassurance. Therefore, perceived social support may influence anxiety both directly, by reducing the psychological impact of stress, and indirectly, by strengthening internal capacities such as resilience, emotion regulation, and ego functioning.

The relationship between social support and ego strength may be particularly important in populations exposed to migration-related adjustment demands. Migration may require individuals to adapt to unfamiliar social norms, altered family structures, employment insecurity, language barriers, uncertain legal circumstances, and reduced access to established support networks. These circumstances do not inevitably lead to psychological problems, but they may increase the importance of both perceived interpersonal support and internal regulatory capacities. For Afghan nationals living outside their country of origin, the psychological meaning of family relationships, friendship networks, community belonging, and support from significant others may influence the manner in which stress is interpreted and managed. Perceived support may reinforce a stable sense of self and provide emotional conditions that enable more adaptive ego functioning. In contrast, social

isolation may intensify emotional dysregulation and leave individuals with fewer resources for containing anxiety.

The available treatment literature also demonstrates that no single intervention or explanatory mechanism is sufficient for all individuals. Evidence syntheses, treatment guidelines, clinical trials, and studies of treatment-resistant cases collectively support a multidimensional understanding of anxiety-related psychopathology (Castle et al., 2023; Van Ameringen et al., 2026). The development of structured evidence-synthesis standards, including extensions of reporting guidelines for scoping reviews, has further encouraged systematic identification of conceptual and empirical gaps across complex areas of psychological research (Tricco et al., 2018). Within this multidimensional framework, interpersonal support, emotion regulation, and ego strength can be understood as interconnected rather than isolated variables. Perceived social support may reinforce ego strength through experiences of security, validation, and reliable assistance, while difficulties in emotion regulation may weaken ego functioning by overwhelming the individual's capacity to manage affect, impulses, and internal conflict.

A structural model incorporating these variables may clarify both direct and indirect pathways to anxiety symptoms. Perceived social support may be negatively associated with anxiety because supportive interpersonal relationships reduce perceived threat and facilitate coping. Difficulties in emotion regulation may be positively associated with anxiety because poorly understood, rejected, or uncontrolled emotions can amplify physiological and cognitive arousal. Ego strength may be negatively related to anxiety by enabling adaptive defenses, resilience, impulse control, and effective coping. More importantly, ego strength may mediate the effects of both perceived social support and emotion-regulation difficulties. Social support may reduce anxiety partly by strengthening ego capacities, whereas emotion-regulation difficulties may increase anxiety partly by undermining those capacities. Despite the theoretical plausibility of these pathways, integrated empirical models examining these relationships among Afghan nationals remain limited.

Accordingly, the present study aimed to evaluate a causal model of anxiety symptoms based on perceived social support and difficulties in emotion regulation, with ego strength as a mediator, among Afghan nationals.

2. Methods and Materials

2.1. Study Design and Participants

In terms of its objective, this study was applied research, and in terms of data collection and analysis, it employed a descriptive-correlational design. The statistical population consisted of all Afghan women and men residing in Tehran during 2024–2025. The sample size was determined according to the guideline proposed by Kline (2023). According to this guideline, a sample of 10 to 20 participants per observed variable is considered appropriate. The general principle governing the relationship between multivariate normality and sample size is that the greater the deviation from multivariate normality, the larger the ratio of respondents required to estimate each parameter. An acceptable ratio for minimizing parameter-estimation errors is at least 15 participants for each free parameter in the model. Accordingly, the sample consisted of 204 Afghan nationals selected through stratified sampling. The inclusion criteria were as follows: (1) Afghan nationality; (2) residence in Tehran for at least the previous six months; (3) provision of informed consent to participate in the study; (4) ability to read, understand, and respond to the questionnaire items; and (5) no self-reported history of severe psychiatric disorders or use of psychiatric medications. The exclusion criteria were as follows: (1) incomplete questionnaires; (2) unwillingness to continue participating in the study; and (3) unrealistic or random responses to the questionnaires.

In the present study, after reviewing the theoretical literature, obtaining the necessary permissions, and preparing the questionnaires in an online format, an invitation to participate was disseminated through social media networks used by the Afghan community. Women and men interested in participating contacted the researcher and, after completing a demographic questionnaire and being evaluated according to the inclusion and exclusion criteria, completed the study questionnaires. Once the required number of participants had been reached, the data were extracted and prepared for analysis. Research ethics principles, including confidentiality, anonymity, and respect for participants' privacy, were observed throughout the study. To comply with ethical principles, all questionnaires were completed anonymously, and informed consent was obtained from participants before they responded to the questionnaires.

2.2. Measures

The State-Trait Anxiety Inventory was developed by Spielberger in 1971. The inventory consists of 40 items, with the first 20 items assessing state anxiety and the second 20 items assessing trait anxiety. The state-anxiety items are scored on a four-point Likert scale ranging from “not at all,” “somewhat,” and “moderately so” to “very much so.” The trait-anxiety items are scored using the response options “almost never,” “sometimes,” “often,” and “almost always.” Some items are reverse-scored. In the state-anxiety subscale, Items 1, 2, 5, 8, 10, 11, 15, 16, 19, and 20 are reverse-scored, whereas in the trait-anxiety subscale, Items 21, 23, 26, 27, 30, 33, 34, 36, and 39 are reverse-scored. Two separate scores are ultimately obtained for state anxiety and trait anxiety. Scores on each subscale range from 20 to 80, with higher scores indicating greater anxiety. Based on the raw scores, anxiety is interpreted at four levels: mild (20–29), relatively mild (30–49), relatively severe (50–69), and severe (70–80). Regarding psychometric properties, Cronbach’s alpha coefficients of .92 and .90 have been reported for the state-anxiety and trait-anxiety subscales, respectively (Spielberger et al., 1971). The inventory was standardized in Iran by Mehram (1991), who reported a reliability coefficient of .91. In the present study, Cronbach’s alpha was .63 for state anxiety and .71 for trait anxiety.

The Multidimensional Scale of Perceived Social Support provides a subjective assessment of the perceived adequacy of social support (Zimet et al., 1988). This 12-item scale assesses perceptions of the adequacy of social support received from three sources: family, friends, and significant others. Perceived social support is scored by calculating the scores for each subscale based on participants’ responses to the relevant items. The scale uses seven response options: “very strongly disagree” (1), “strongly disagree” (2), “mildly disagree” (3), “neutral” (4), “mildly agree” (5), “strongly agree” (6), and “very strongly agree” (7). To calculate each subscale score, the scores of the relevant items are summed, and the total perceived social support score is obtained by summing the scores of all 12 items. The items related to support from significant others, family, and friends were reported as Items 1, 2, and 5; Items 3, 4, and 7; and Items 6, 8, and 9, respectively. The questionnaire scores range from 12 to 72. Higher scores indicate higher levels of overall perceived social support. In addition, summing the scores for the items belonging to each subscale produces the participant’s score for each of the three sources of social support. In the study by Zimet et al. (1988), Cronbach’s

alpha coefficients for the overall perceived social support factor and the significant-other, family, and friend dimensions were .94, .84, .89, and .92, respectively. Salimi et al. (2009) reported Cronbach’s alpha coefficients of .86, .86, and .82 for social support received from family, friends, and significant others, respectively. In the present study, Cronbach’s alpha coefficients were .93 for family support, .89 for friend support, and .86 for support from significant others.

The Difficulties in Emotion Regulation Scale was developed by Gratz and Roemer in 2004. It consists of 36 items designed to identify an individual’s deficiencies and difficulties in emotion regulation. The scale contains six subscales: nonacceptance of negative emotional responses (Items 29, 25, 23, 21, 12, and 11); difficulties engaging in goal-directed behavior when distressed (Items 32, 27, 24, 19, 14, and 3); difficulties controlling impulsive behavior when distressed (Items 33, 26, 20, 18, and 13); limited access to effective emotion-regulation strategies (Items 34, 17, 10, 8, 6, and 2); lack of emotional awareness (Items 36, 35, 31, 30, 28, 22, 16, and 15); and lack of emotional clarity (Items 9, 7, 5, 4, and 1). Items are scored on a five-point Likert scale ranging from 1 (“almost never”) to 5 (“almost always”). Items 1, 2, 6, 7, 8, 10, 17, 20, 22, 24, and 34 are reverse-scored, such that 1 is converted to 5, 2 to 4, 3 remains 3, 4 is converted to 2, and 5 to 1. The reported total score for difficulties in emotion regulation ranges from 1 to 36. Cronbach’s alpha coefficients have been reported to range from .73 to .88 for nonacceptance of negative emotions, .72 to .89 for difficulties engaging in goal-directed behavior, .75 to .90 for difficulties controlling impulsive behavior, .76 to .85 for limited access to effective emotion-regulation strategies, .72 to .86 for lack of emotional awareness, .77 to .90 for lack of emotional clarity, and .79 to .92 for the total scale score (Gratz & Roemer, 2004). These coefficients support the internal consistency of the Persian version of the Difficulties in Emotion Regulation Scale. Test-retest reliability coefficients obtained across two administrations separated by four to six weeks ranged from .70 to .83 for nonacceptance of negative emotions, .70 to .85 for difficulties engaging in goal-directed behavior, .72 to .86 for difficulties controlling impulsive behavior, .69 to .78 for limited access to effective emotion-regulation strategies, .68 to .80 for lack of emotional awareness, .73 to .85 for lack of emotional clarity, and .71 to .87 for the total scale score (Besharat, 2018). In the present study, Cronbach’s alpha coefficients were .84 for nonacceptance of emotional responses, .82 for difficulties engaging in goal-directed

behavior, .80 for impulse-control difficulties, .63 for lack of emotional awareness, .81 for limited access to emotion-regulation strategies, and .60 for lack of emotional clarity.

The Ego Strength Scale developed by Besharat (2016) was designed to assess individuals' psychological and ego-related capacity to cope with pressures, conflicts, and emotions among adolescents and adults. Its conceptual foundations are rooted in psychoanalytic theory and ego psychology. The instrument consists of 35 items and assesses four subscales—ego control, defense mechanisms, resilience, and coping strategies—using a five-point Likert scale ranging from “strongly disagree” to “strongly agree.” Higher scores indicate greater ego strength. Besharat (2016) reported Cronbach's alpha coefficients ranging from .69 to .85 for the instrument. Correlations between the instrument's subscales and psychological well-being and positive affect ranged from .30 to .43, whereas correlations with psychological distress, difficulties in negative emotion regulation, and negative affect ranged from $-.27$ to $-.46$. In the present study, Cronbach's alpha coefficient for the questionnaire was .82.

2.3. Data Analysis

The questionnaire data were entered into SPSS version 26 and AMOS version 26 and analyzed using descriptive statistics and structural equation modeling.

3. Findings and Results

The present study included 204 Afghan participants, comprising 85 women and 119 men. Of the participants, 36 individuals (17.6%) were younger than 18 years, 37 (18.1%) were between 19 and 22 years, 36 (17.6%) were between 23 and 26 years, 46 (22.5%) were between 27 and 30 years, and 49 (24.0%) were older than 30 years. Regarding educational attainment, 55 participants (27.0%) had basic reading and writing skills, 78 (38.2%) had completed middle school, 42 (20.6%) had completed high school, 17 (8.3%) held a high school diploma, and 12 (5.9%) had education beyond the high school diploma. Among the participants, 70 (34.3%) were single and 134 (65.7%) were married. It should also be noted that 21 participants (14.6%) had lived in Iran for fewer than three years, 67 (32.7%) for three to six years, 47 (22.9%) for seven to ten years, and 40 (19.5%) for more than ten years. Furthermore, 21 participants (10.2%) had been born in Iran.

Table 1 presents the means, standard deviations, and correlation coefficients among the dimensions of perceived social support—family support, friend support, and support from significant others; difficulties in emotion regulation—nonacceptance of emotional responses, difficulties engaging in goal-directed behavior, impulse-control difficulties, lack of emotional awareness, limited access to emotion-regulation strategies, and lack of emotional clarity; ego strength; and anxiety symptoms—state anxiety and trait anxiety.

Table 1

Means, Standard Deviations, and Correlation Matrix of the Study Variables Among Afghan Participants

Study variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Perceived social support—Family support	—											
2. Perceived social support—Friend support	.62**	—										
3. Perceived social support—Support from significant others	.84**	.69**	—									
4. Difficulties in emotion regulation—Nonacceptance of emotional responses	-.35**	-.28**	-.45**	—								
5. Difficulties in emotion regulation—Difficulties engaging in goal-directed behavior	-.32**	-.22**	-.35**	.44**	—							
6. Difficulties in emotion regulation—Impulse-control difficulties	-.35**	-.21**	-.37**	.55**	.63**	—						
7. Difficulties in emotion regulation—Lack of emotional awareness	-.30**	-.21**	-.37**	.46**	.33**	.28**	—					

8. Difficulties in emotion regulation—Limited access to emotion-regulation strategies	-.37**	-.34**	-.42**	.47**	.57**	.61**	.33**	—				
9. Difficulties in emotion regulation—Lack of emotional clarity	-.30**	-.25**	-.37**	.46**	.35**	.34**	.52**	.46**	—			
10. Ego strength	.46**	.38**	.59**	-.44**	-.40**	-.35**	-.47**	-.36**	-.39**	—		
11. Anxiety symptoms—State anxiety	-.42**	-.29**	-.45**	.38**	.34**	.35**	.38**	.27**	.30**	-.55**	—	
12. Anxiety symptoms—Trait anxiety	-.42**	-.32**	-.45**	.31**	.40**	.34**	.35**	.24**	.26**	-.52**	.74**	—
Mean	16.58	13.89	16.45	14.27	15.55	15.42	16.21	20.92	13.06	85.92	27.76	25.78
Standard deviation	6.55	5.40	6.22	6.35	5.17	5.74	4.72	7.11	3.50	12.78		

As shown in Table 1, the correlations among the variables were in the expected directions and were consistent with the theoretical foundations of the research field. To evaluate the assumption of univariate normality, the skewness and

kurtosis values of each variable were examined. To evaluate multicollinearity, the variance inflation factor (VIF) and tolerance coefficients were examined. The results are presented in Table 2.

Table 2

Evaluation of the Normality and Multicollinearity Assumptions

Variable	Skewness	Kurtosis	Tolerance	VIF
Perceived social support—Family support	-0.24	-1.27	.27	3.68
Perceived social support—Friend support	0.10	-1.04	.51	1.97
Perceived social support—Support from significant others	-0.27	-0.21	.32	3.09
Difficulties in emotion regulation—Nonacceptance of emotional responses	0.62	-0.60	.54	1.86
Difficulties in emotion regulation—Difficulties engaging in goal-directed behavior	0.06	-1.05	.52	1.91
Difficulties in emotion regulation—Impulse-control difficulties	0.28	-0.67	.45	2.24
Difficulties in emotion regulation—Lack of emotional awareness	0.03	-0.90	.62	1.63
Difficulties in emotion regulation—Limited access to emotion-regulation strategies	-0.33	-0.51	.50	2.02
Difficulties in emotion regulation—Lack of emotional clarity	0.21	-0.53	.61	1.63
Ego strength	-0.27	-0.14	.55	1.82
Anxiety symptoms—State anxiety	0.38	-0.12	—	—
Anxiety symptoms—Trait anxiety	0.41	-0.20	—	—

As shown in Table 2, the skewness and kurtosis values of all components were within the range of ± 2 . This finding indicates that the assumption of univariate normality was satisfied. Table 2 also indicates that the assumption of no problematic multicollinearity was satisfied because the tolerance coefficients for the predictor variables were greater than .10 and their VIF values were lower than 10. According to Meyers et al. (2006), a tolerance coefficient lower than .10 and a VIF value greater than 10 indicate a violation of the multicollinearity assumption. To evaluate the assumption of multivariate normality, information related to Mahalanobis distance was analyzed. The skewness and kurtosis values for the Mahalanobis distance were 1.41 and 0.79, respectively, indicating that the assumption of multivariate normality was satisfied. Finally, to assess the assumption of homoscedasticity, a scatterplot of the standardized residual

variances was examined. The results indicated that the homoscedasticity assumption was satisfied.

As illustrated in Figure 1, difficulties in emotion regulation, perceived social support, and anxiety symptoms were modeled as latent variables and constituted the measurement model of the study. It was hypothesized that the indicators of family support, friend support, and support from significant others would measure the latent variable of perceived social support. The indicators of nonacceptance of emotional responses, difficulties engaging in goal-directed behavior, impulse-control difficulties, lack of emotional awareness, limited access to emotion-regulation strategies, and lack of emotional clarity were hypothesized to measure the latent variable of difficulties in emotion regulation. State anxiety and trait anxiety were hypothesized to measure the latent variable of anxiety symptoms. The fit of the measurement model was evaluated using confirmatory

factor analysis, AMOS version 24.0, and maximum likelihood estimation. Table 3 presents the goodness-of-fit indices for the measurement and structural models.

Table 3

Goodness-of-Fit Indices for the Measurement and Structural Models

Goodness-of-fit index	Initial measurement model	Modified measurement model	Structural model	Recommended cutoff
Chi-square, χ^2	101.06	78.31	94.61	—
Degrees of freedom	41	40	48	—
χ^2/df	2.47	1.96	1.97	< 3
GFI	.911	.933	.925	> .90
AGFI	.857	.890	.878	> .85
CFI	.947	.965	.963	> .90
RMSEA	.085	.069	.069	< .08

According to the results presented in Table 3, with the exception of the RMSEA, the other goodness-of-fit indices obtained from the confirmatory factor analysis supported an acceptable fit of the initial measurement model to the collected data. Given the importance of the RMSEA in evaluating model fit, the modification indices were examined. Based on these indices, a covariance was specified between the error terms of the lack-of-emotional-awareness and lack-of-emotional-clarity indicators. Following this modification, acceptable goodness-of-fit indices were obtained for the measurement model, as shown in Table 3. In the measurement model, the largest factor loading was associated with the support-from-significant-others indicator ($\beta = .974$), whereas the smallest factor loading was associated with the lack-of-emotional-

awareness indicator ($\beta = .483$). Because the factor loadings of all indicators were greater than .32, all indicators were considered sufficiently capable of measuring the latent variables of the present study.

Following the evaluation of the measurement model fit, the goodness-of-fit indices of the structural model were estimated and evaluated in the second stage. The structural model hypothesized that perceived social support and difficulties in emotion regulation would be associated with anxiety symptoms through the mediating role of ego strength among Afghan nationals. The model was analyzed, and as shown in Table 3, all goodness-of-fit indices supported an acceptable fit of the structural model to the collected data. Table 4 presents the direct, indirect, and total path coefficients in the structural model.

Table 4

Direct, Indirect, and Total Path Coefficients Among the Study Variables in the Structural Model

Effect	Path	<i>b</i>	<i>SE</i>	β	<i>p</i>
Direct	Perceived social support → Ego strength	.813	.149	.411	.001
Direct	Difficulties in emotion regulation → Ego strength	-.922	.233	-.318	.001
Direct	Ego strength → Anxiety symptoms	-.148	.032	-.406	.001
Direct	Perceived social support → Anxiety symptoms	-.124	.068	-.172	.079
Direct	Difficulties in emotion regulation → Anxiety symptoms	.226	.112	.213	.010
Indirect	Perceived social support → Anxiety symptoms	-.121	.038	-.167	.001
Indirect	Difficulties in emotion regulation → Anxiety symptoms	.137	.041	.129	.001
Total	Perceived social support → Anxiety symptoms	-.245	.066	-.339	.001
Total	Difficulties in emotion regulation → Anxiety symptoms	.363	.114	.342	.001

Table 4 indicates that the total path coefficient between perceived social support and anxiety symptoms was negative and statistically significant ($\beta = -.339$, $p = .001$), whereas the total path coefficient between difficulties in emotion regulation and anxiety symptoms was positive and statistically significant ($\beta = .342$, $p = .001$). The path

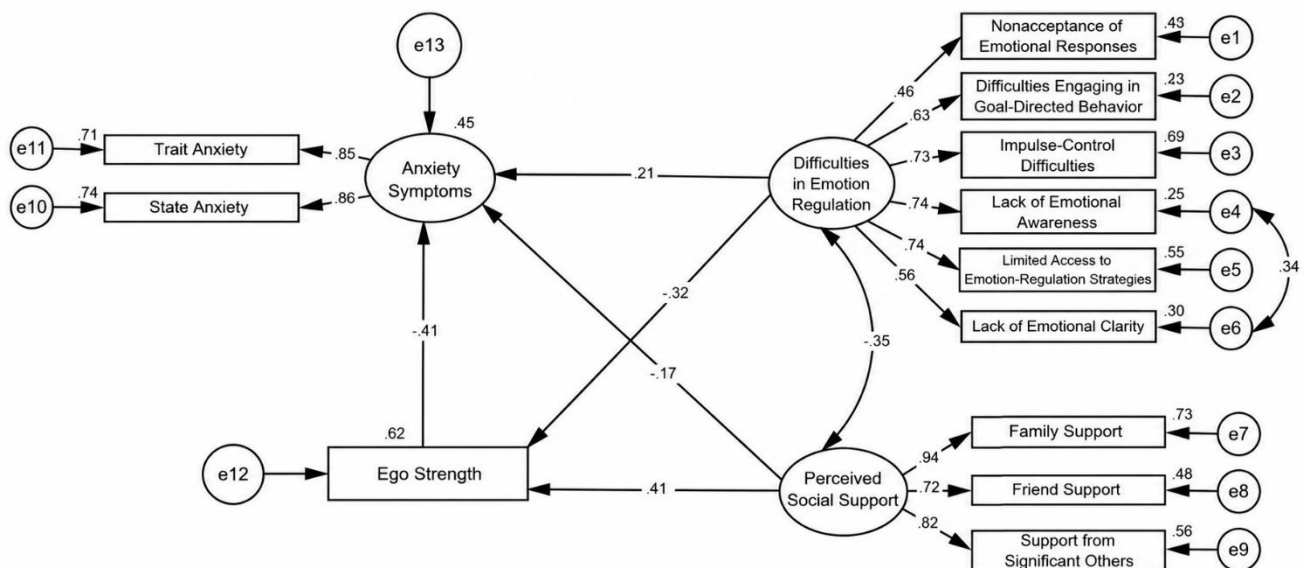
coefficient between ego strength and anxiety symptoms was also negative and statistically significant ($\beta = -.406$, $p = .001$). According to the results presented in Table 4, the indirect path coefficient between perceived social support and anxiety symptoms was negative and statistically significant ($\beta = -.167$, $p = .001$), whereas the indirect path

coefficient between difficulties in emotion regulation and anxiety symptoms was positive and statistically significant ($\beta = .129, p = .001$). Accordingly, it was concluded that ego strength significantly mediated the negative relationship between perceived social support and anxiety symptoms and

the positive relationship between difficulties in emotion regulation and anxiety symptoms among Afghan nationals. Figure 1 presents the standardized parameters of the study's structural model.

Figure 1

Standardized Parameters of the Study's Structural Model



The figure indicates that the squared multiple correlation coefficient (R^2) for anxiety symptoms was .46. This finding indicates that difficulties in emotion regulation, perceived social support, and ego strength collectively explained 46% of the variance in anxiety symptoms among Afghan nationals.

4. Discussion

The present study evaluated a structural model of anxiety symptoms based on perceived social support and difficulties in emotion regulation, with ego strength functioning as a mediating variable, among Afghan nationals residing in Tehran. The findings indicated that the proposed model had an acceptable fit to the data and explained approximately 46% of the variance in anxiety symptoms. This proportion of explained variance suggests that anxiety symptoms in this population are meaningfully associated with the interaction of interpersonal resources, emotional-regulation capacities, and intrapsychic strength. More specifically, perceived social support positively predicted ego strength, whereas difficulties in emotion regulation negatively predicted ego strength. Ego strength, in turn, had a significant negative

effect on anxiety symptoms. Difficulties in emotion regulation also exerted a significant positive direct effect on anxiety symptoms. Although the direct effect of perceived social support on anxiety symptoms was not statistically significant, its indirect effect through ego strength was significant. These findings indicate that perceived social support may reduce anxiety primarily by strengthening internal psychological capacities rather than through an immediate and independent effect on symptoms.

The finding that perceived social support positively predicted ego strength indicates that individuals who perceived greater support from family members, friends, and significant others were more likely to possess stronger psychological capacities for managing stress, emotional conflict, and internal pressure. Social support may contribute to ego strength by providing emotional security, interpersonal validation, opportunities for emotional expression, and practical assistance during stressful situations. When individuals believe that reliable others are available to them, distressing experiences may be perceived as more manageable, and they may be less likely to respond to stress with helplessness, disorganization, or rigid

defensive reactions. Supportive interpersonal relationships may therefore reinforce resilience, impulse control, adaptive coping, and the capacity to maintain psychological coherence under demanding circumstances.

This finding is indirectly consistent with research on barriers and facilitators of psychological treatment. Bey et al. found that attitudes toward treatment, social circumstances, access to care, and perceived facilitators influenced help-seeking among adults with obsessive-compulsive disorder (Bey et al., 2025). Although the present study examined anxiety symptoms rather than treatment-seeking behavior, both findings highlight the importance of the interpersonal and social context in psychological adaptation. Individuals embedded in supportive networks may be more likely to recognize distress, seek assistance, tolerate difficult emotional experiences, and remain engaged in adaptive coping. Conversely, inadequate support may increase isolation and reduce the availability of interpersonal resources needed to manage persistent anxiety.

The significant indirect effect of perceived social support on anxiety symptoms through ego strength further clarifies the mechanism underlying this relationship. The nonsignificant direct path from perceived social support to anxiety suggests that support alone may not automatically lead to lower anxiety. Rather, its protective effect may depend on whether the individual internalizes supportive experiences and translates them into stronger coping capacities, emotional stability, and psychological resilience. Thus, two individuals with comparable levels of available social support may differ in anxiety symptoms depending on the degree to which that support contributes to their ego functioning. This finding supports a process-oriented perspective in which external resources influence psychological symptoms through internal capacities.

The mediating role of ego strength can also be interpreted in light of research on psychological flexibility and acceptance-based interventions. Acceptance and commitment therapy emphasizes the ability to remain in contact with distressing thoughts and emotions without becoming dominated by them and to continue engaging in meaningful behavior despite discomfort. Studies have shown that acceptance-based interventions can reduce obsessive-compulsive symptoms and experiential avoidance, suggesting that increased psychological flexibility is relevant to managing anxiety-related distress (Loureiro et al., 2026; Rohani et al., 2018; Zemestani et al., 2022). A recent randomized trial also indicated that group acceptance and commitment therapy may constitute a viable

alternative to cognitive-behavioral therapy and exposure and response prevention for some patients with obsessive-compulsive disorder (Nielsen et al., 2025). Although psychological flexibility and ego strength are distinct constructs, both involve the capacity to tolerate internal discomfort, regulate behavior, and avoid rigid reactions to distress. Accordingly, perceived social support may reduce anxiety by reinforcing these internal adaptive capacities.

The finding that difficulties in emotion regulation had a significant positive direct effect on anxiety symptoms was consistent with the theoretical expectation that ineffective management of emotional experiences intensifies psychological distress. Individuals who have difficulty accepting negative emotions, maintaining goal-directed behavior during distress, controlling impulses, identifying emotional states, or accessing effective regulation strategies may experience emotional arousal as unpredictable and uncontrollable. Such experiences can increase vigilance, worry, fear of losing control, and reliance on maladaptive avoidance. Anxiety may consequently be maintained not only by the initial emotional response but also by the person's negative reaction to that response.

This interpretation is consistent with evidence indicating that emotion regulation, experiential avoidance, and intolerance of uncertainty are important treatment targets in anxiety-related psychopathology. Mirzapour Alamdari et al. reported that exposure and response prevention and emotion-focused therapy influenced experiential avoidance, intolerance of uncertainty, and emotion regulation among individuals with obsessive-compulsive disorder (Mirzapour Alamdari et al., 2025). Similarly, Rajaei Moshaei and Rasouli showed that repetitive transcranial magnetic stimulation affected emotion regulation and doubt in adults with obsessive-compulsive disorder (Rajaei Moshaei & Rasouli, 2025). Although these studies used clinical OCD samples, their findings support the broader proposition that emotion-regulation deficits are closely linked to anxiety-related cognitive and behavioral symptoms.

The present finding is also compatible with mindfulness-based research. Mindfulness-based cognitive therapy encourages individuals to observe intrusive thoughts and negative emotions without judgment or immediate reaction. Key et al. found that mindfulness-based cognitive therapy could be used as an augmentation intervention for obsessive-compulsive disorder (Key et al., 2017). Külz et al. similarly demonstrated the utility of mindfulness-based cognitive therapy for patients who continued to experience residual symptoms after cognitive-behavioral therapy (Kulz et al.,

2019). These studies suggest that improving awareness, acceptance, and nonreactivity toward internal experiences may reduce persistent anxiety-related symptoms. In the present study, higher difficulty in emotion regulation was associated with greater anxiety, supporting the converse implication that low emotional awareness, poor acceptance, and limited regulatory strategies contribute to symptom severity.

Difficulties in emotion regulation also had a significant negative effect on ego strength. This finding indicates that emotional dysregulation may weaken individuals' broader capacity to manage psychological pressure. Persistent emotional confusion, nonacceptance, and impulse-control difficulties may consume cognitive and psychological resources, interfere with adaptive defense mechanisms, and undermine the individual's sense of internal control. When emotions are experienced as overwhelming, individuals may be less able to assess situations realistically, delay impulsive responses, or continue purposeful activity. Ego functioning may consequently become less stable, increasing vulnerability to anxiety.

The indirect effect of difficulties in emotion regulation on anxiety symptoms through ego strength supports this interpretation. Emotional dysregulation appeared to contribute to anxiety partly by reducing the individual's psychological capacity to contain and manage distress. Therefore, difficulties in emotion regulation may operate through at least two pathways: a direct pathway in which unregulated emotional arousal intensifies anxiety and an indirect pathway in which repeated emotional dysregulation weakens ego strength and thereby increases susceptibility to anxiety. This finding expands the understanding of emotional dysregulation by demonstrating that its effects may extend beyond momentary emotional distress and influence broader personality-related capacities.

Evidence from intensive treatment studies provides indirect support for the importance of these capacities. Intensive and concentrated exposure-based treatments require patients to confront feared stimuli, tolerate strong emotional arousal, resist habitual responses, and remain engaged in goal-directed therapeutic activity. Concentrated exposure and response prevention has shown beneficial effects in individuals with difficult-to-treat symptoms, but treatment outcomes can vary according to psychological characteristics such as insight and capacity to engage with distress (Tjelle et al., 2025; Trent et al., 2025). Similarly, intensive inpatient and residential programs have produced meaningful improvement among individuals with severe or

treatment-resistant obsessive-compulsive disorder, although a proportion of patients retain symptoms or demonstrate variable long-term outcomes (Balachander et al., 2020; Nanjundaswamy et al., 2020; Veale, Naismith, Miles, Childs, et al., 2016; Veale, Naismith, Miles, Gledhill, et al., 2016). These findings are compatible with the present result that ego strength is an important predictor of anxiety symptoms because the ability to tolerate distress, regulate impulses, and sustain adaptive behavior may determine how effectively individuals cope with anxiety-provoking experiences.

The negative association between ego strength and anxiety symptoms was another central finding. Individuals with greater ego strength reported lower state and trait anxiety. Strong ego functioning may protect against anxiety by enabling individuals to tolerate frustration, distinguish realistic threats from internally generated fears, employ flexible defense mechanisms, and maintain behavioral control under emotional pressure. In contrast, individuals with weaker ego strength may interpret distress as more threatening, feel less capable of coping, and rely more heavily on avoidance or rigid defenses. Their anxiety may consequently become more persistent and generalized.

This result can also be explained through cognitive accounts of anxiety-related symptoms. The inference-based approach proposes that obsessive doubt develops when individuals become absorbed in imagined possibilities and distance themselves from direct evidence (Aardema et al., 2017). Ego strength may help individuals preserve reality-based appraisal, cognitive organization, and confidence in their own perceptions. Reduced ego strength may instead increase vulnerability to doubt, uncertainty, and internally generated threat narratives. Although the present study did not directly assess inferential confusion, the negative relationship between ego strength and anxiety is consistent with the idea that stronger integrative psychological functioning protects individuals from becoming overwhelmed by threat-related cognition.

The importance of ego strength is also reflected in findings concerning incomplete remission and treatment resistance. Meta-analytic and guideline-based evidence indicates that evidence-based treatments such as cognitive-behavioral therapy, exposure and response prevention, and pharmacotherapy are effective, yet not all patients achieve remission (Bandelow et al., 2023; Ost et al., 2022; Reid et al., 2021; Van Ameringen et al., 2026). Simpson et al. showed that maximizing remission among medicated adults required intensive cognitive-behavioral intervention, while

Ramakrishnan et al. demonstrated that definitions of response and remission vary and that symptom reduction should not be equated automatically with complete recovery (Ramakrishnan et al., 2024; Simpson et al., 2021). These findings suggest that enduring psychological capacities may influence whether individuals move beyond partial improvement toward stable adaptation. The present results identify ego strength as one such capacity.

The structural model's ability to explain approximately 46% of the variance in anxiety symptoms is clinically and theoretically meaningful. It indicates that anxiety among Afghan nationals is not solely associated with emotional dysregulation or the absence of social resources. Instead, anxiety appears to emerge from the interaction between external support and internal psychological organization. Perceived social support was associated with stronger ego functioning, whereas emotional-regulation difficulties were associated with weaker ego functioning. Ego strength then predicted lower anxiety. This configuration indicates that ego strength acts as a central psychological mechanism through which environmental and emotional factors become associated with anxiety symptoms.

The findings are particularly relevant to Afghan nationals living in a migration context. Migration may involve disruptions in family networks, altered social roles, economic pressure, uncertainty regarding residence or employment, cultural adaptation, and difficulties accessing appropriate psychological services. Under such circumstances, perceived support may protect psychological functioning, while emotional-regulation difficulties may intensify the effects of stress. However, the significant mediating role of ego strength indicates that the psychological consequences of such experiences are not determined solely by external conditions. The capacity to integrate emotional experiences, sustain adaptive coping, and preserve a coherent sense of self appears to be equally important.

5. Conclusion

Overall, the present findings support a multidimensional account of anxiety symptoms. Difficulties in emotion regulation were directly associated with higher anxiety and indirectly associated with anxiety through reduced ego strength. Perceived social support was not directly associated with anxiety after the other variables were considered, but it exerted a significant protective effect by strengthening ego functioning. Ego strength therefore

represented the principal mediating mechanism in the model. These results suggest that the prevention and treatment of anxiety may be improved by combining interpersonal support interventions with strategies designed to strengthen emotional regulation, resilience, adaptive defenses, and coping capacities.

This study had several limitations. Its cross-sectional and correlational design does not permit definitive causal conclusions, even though the proposed relationships were tested through structural equation modeling. All variables were measured using self-report questionnaires, which may have increased the effects of shared-method variance, social desirability, inaccurate recall, and response bias. The online administration of the questionnaires may also have excluded individuals with limited internet access or digital literacy. The sample was restricted to Afghan nationals residing in Tehran; therefore, the findings may not generalize to Afghan populations living in other regions, rural settings, refugee camps, or different host countries. Some subscales also demonstrated relatively low internal-consistency coefficients, which may have reduced measurement precision. In addition, potentially influential factors such as migration status, economic insecurity, trauma exposure, discrimination, length of separation from family, psychiatric comorbidity, and access to mental health services were not included in the model.

Future studies should examine the proposed model using longitudinal and prospective designs to determine the temporal ordering of perceived social support, emotion-regulation difficulties, ego strength, and anxiety symptoms. Experimental and intervention studies could investigate whether strengthening ego functioning produces measurable reductions in anxiety and whether it enhances the effects of social-support or emotion-regulation interventions. Future research should recruit more diverse samples of Afghan nationals from different cities, age groups, migration circumstances, and socioeconomic backgrounds. Multi-informant assessments, clinical interviews, behavioral tasks, and physiological indicators could be used alongside self-report measures. Researchers should also examine additional mediators and moderators, including psychological flexibility, resilience, experiential avoidance, perceived discrimination, trauma history, acculturation stress, family cohesion, gender, and duration of residence in the host country.

Mental health professionals working with Afghan nationals should assess social resources, emotional-regulation abilities, and ego functioning together rather than

focusing exclusively on anxiety symptoms. Interventions should include training in emotional awareness, acceptance of negative emotions, impulse control, distress tolerance, goal-directed behavior, and adaptive coping. Family- and community-based programs may help strengthen supportive relationships and reduce social isolation, while individual psychotherapy can focus on resilience, psychological integration, flexible defense mechanisms, and confidence in coping with distress. Services should be culturally sensitive, linguistically accessible, and attentive to migration-related stressors. Screening and early-intervention programs delivered through community centers, primary care settings, schools, and migrant-support organizations may facilitate identification of vulnerable individuals and improve access to appropriate psychological support.

Authors' Contributions

Authors equally contributed to this article.

Declaration

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

Transparency Statement

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

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

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