

Prediction of Difficulties in Emotion Regulation Based on Internal Locus of Control with the Mediating Role of Emotion-Focused Coping Strategies in Infertile Women

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ABSTRACT

Objective: The present study aimed to predict difficulties in emotion regulation based on internal locus of control through the mediating role of emotion-focused coping strategies among infertile women in Tehran.

Methods and Materials: This research employed a descriptive-correlational design using structural equation modeling (SEM). The statistical population consisted of infertile women referring to infertility treatment centers in Tehran in 2025. Based on Krejcie and Morgan's sample size determination table, 400 participants were selected through convenience sampling. Data were collected using standardized instruments: the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004), the Rotter's Internal-External Locus of Control Scale (Rotter, 1966), and the Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990). Data analysis was performed using SPSS-27 for descriptive and correlational statistics and AMOS-21 for structural equation modeling. Model fit was evaluated using χ^2/df , GFI, AGFI, CFI, TLI, and RMSEA indices.

Findings: Results showed that internal locus of control was significantly and negatively correlated with difficulties in emotion regulation ($r = -.48$, $p < .001$) and emotion-focused coping ($r = -.36$, $p < .001$), while emotion-focused coping was positively correlated with difficulties in emotion regulation ($r = .42$, $p < .001$). The SEM results confirmed that internal locus of control had a direct negative effect on emotion regulation difficulties ($\beta = -.33$, $p < .001$) and an indirect effect through emotion-focused coping ($\beta = -.14$, $p < .01$). The model fit indices ($\chi^2/df = 1.73$, GFI = 0.94, CFI = 0.96, RMSEA = 0.042) indicated an excellent model fit.

Conclusion: Internal locus of control plays a crucial protective role in reducing emotional regulation difficulties among infertile women, both directly and indirectly, through the regulation of emotion-focused coping strategies. Strengthening internal control beliefs and promoting adaptive emotional coping can enhance psychological resilience in infertility-related distress.

Keywords: Infertility; Internal Locus of Control; Emotion Regulation; Emotion-Focused Coping; Structural Equation Modeling.

1. Introduction

Infertility is a psychologically and emotionally distressing experience that affects women on multiple dimensions of well-being, including emotional stability, identity, and interpersonal relationships. The inability to conceive not only challenges women's reproductive health but also provokes significant emotional turmoil, self-blame, and social stigma, which can exacerbate difficulties in emotion regulation and elevate stress vulnerability (Shabannejad et al., 2021). In this context, emotion regulation—the ability to identify, modulate, and express emotional responses adaptively—plays a crucial role in coping with the psychological burden of infertility. Women who experience difficulties in emotion regulation are more likely to exhibit maladaptive cognitive and behavioral reactions, such as emotional suppression, impulsivity, and rumination, which intensify distress and reduce coping effectiveness (Villacura-Herrera et al., 2025).

Emotion regulation is defined as the set of internal and external processes involved in monitoring, evaluating, and modifying emotional reactions to achieve personal goals (Sari et al., 2024). Adaptive emotion regulation strategies such as cognitive reappraisal, acceptance, and problem-focused coping have been found to facilitate emotional resilience, while maladaptive strategies such as avoidance and suppression contribute to greater emotional instability and psychological maladjustment (Simonič et al., 2024). In the context of infertility, emotion regulation difficulties are often linked to increased anxiety, depressive symptoms, and reduced psychological flexibility (Yadolahi et al., 2025). Indeed, infertile women often report higher rates of emotional dysregulation due to recurrent treatment failures, uncertainty about outcomes, and perceived social isolation. As infertility persists, the emotional burden tends to escalate, underscoring the need to examine the mechanisms underlying these difficulties and their psychological antecedents (Besharat et al., 2018).

One important individual difference that influences emotion regulation and coping is **locus of control**—the extent to which individuals perceive the outcomes of their lives as contingent upon their own behaviors (internal locus of control) or upon external factors such as luck, fate, or powerful others (external locus of control) (Karaman & Watson, 2017). Originating from Rotter's social learning theory, locus of control reflects generalized expectations regarding control over reinforcements (Darshani, 2014). Research has shown that individuals with an internal locus

of control are more likely to use problem-focused and adaptive coping strategies, maintain self-efficacy in stressful circumstances, and exhibit better psychological adjustment (Åsberg & Renk, 2012). Conversely, individuals with an external locus of control tend to engage in emotion-focused or avoidant coping strategies and experience greater emotional distress when facing uncontrollable stressors (Gaus, 2014).

In the context of infertility, locus of control becomes especially salient. Women who attribute infertility or treatment failures to uncontrollable external factors—such as destiny or medical incompetence—may experience increased feelings of helplessness and hopelessness, exacerbating their emotional dysregulation (Roushanzamir Madbari, 2018). In contrast, those with an internal locus of control are more likely to engage in proactive health behaviors, seek information, and utilize effective coping mechanisms to manage emotional distress (Sukarno et al., 2022). Empirical findings indicate that locus of control not only predicts stress responses but also moderates the relationship between stress and emotional adjustment, suggesting its role as a key psychological determinant of coping effectiveness (Singh et al., 2021).

Coping strategies—defined as cognitive and behavioral efforts to manage internal and external demands perceived as taxing or exceeding one's resources—are essential mediators between stress and emotional outcomes (Masaed, 2013). Coping strategies are typically classified into three broad categories: problem-focused, emotion-focused, and avoidance-oriented coping (Masters et al., 2023). Emotion-focused coping, in particular, reflects the strategies used to manage emotional responses to stress rather than directly addressing the problem. In infertility, such coping responses may include emotional venting, denial, or seeking emotional support. While emotion-focused coping can temporarily alleviate distress, excessive reliance on it, especially in individuals with emotion regulation difficulties, can hinder long-term adaptation (Dyar et al., 2024). Conversely, adaptive emotion regulation through effective coping is associated with greater psychological well-being and lower distress (Simonič et al., 2024).

Studies across different populations have consistently shown that emotion regulation is a strong predictor of psychological resilience, marital satisfaction, and life satisfaction (Sari et al., 2024). For example, research on trauma-exposed individuals found that maladaptive emotion regulation and poor dyadic coping predicted greater relationship distress and psychological dysfunction (Barden

et al., 2024). Similarly, in adolescents, emotion regulation and coping skills are central to understanding vulnerability to psychopathology, including suicidal ideation and internalizing problems (Villacura-Herrera et al., 2025). These findings suggest that the capacity to regulate emotions adaptively and use constructive coping strategies can mitigate emotional distress even in the face of chronic stressors such as infertility.

The relationship between locus of control and emotion regulation has been empirically supported in various contexts. For instance, research by Ghorbani et al. demonstrated that an internal locus of control was significantly associated with higher cognitive self-control and better emotional regulation among substance-dependent individuals (Ghorbani et al., 2017). Similarly, Besharat et al. found that children with a healthy internal locus of control exhibited greater emotional regulation skills and lower levels of rumination compared to those with an external locus of control (Besharat et al., 2018). These findings align with cognitive-behavioral models suggesting that perceived controllability over emotional experiences facilitates active cognitive processing and emotion management. Conversely, individuals who attribute outcomes to external forces may perceive themselves as powerless, leading to emotional dysregulation and maladaptive coping (Coyne & Thompson, 2011).

Locus of control has also been found to play a protective role in occupational, academic, and clinical settings. For example, Karaman and Watson observed that internal locus of control was associated with lower academic stress and higher life satisfaction among university students from different cultural backgrounds (Karaman & Watson, 2017). Likewise, Gaus demonstrated that among female headteachers, those with a higher internal locus of control reported lower job stress and greater satisfaction (Gaus, 2014). These findings underscore the significance of perceived control in buffering against the negative emotional impact of stress and enhancing adaptive functioning. In the domain of health psychology, Rizza et al. showed that locus of control was significantly related to emotional distress and disability among patients with Parkinson's disease, highlighting the centrality of control beliefs in psychological adjustment to chronic illness (Rizza et al., 2017).

The interaction between coping strategies and locus of control has also received substantial empirical support. Individuals with an internal locus of control tend to adopt more problem-focused coping, while those with an external locus are prone to emotion-focused or avoidance coping

(Masaed, 2013). Darshani noted that personality type and control orientation jointly influence how individuals respond to stress, with internalizers being more resilient under pressure (Darshani, 2014). Additionally, research by Åsberg and Renk found that female inmates with internal control beliefs and stronger social support exhibited better psychological adjustment compared to those with external control orientations (Åsberg & Renk, 2012). This pattern of findings emphasizes that control beliefs shape both emotional processing and coping tendencies, which in turn determine psychological outcomes under stress.

Emotion regulation and coping strategies are also deeply interrelated processes. Masters et al. found that adolescents with higher emotion regulation capacities used more adaptive coping responses during social stress tasks, whereas those with emotion dysregulation relied on avoidance or rumination (Masters et al., 2023). Similarly, Dyar et al. reported that coping self-efficacy and emotion regulation strategies moderated the effects of daily stigma on affect among transgender individuals, demonstrating that effective emotion management can buffer against stress-induced affective changes (Dyar et al., 2024). Such findings support the integrative view that coping and emotion regulation are functionally overlapping constructs, jointly contributing to psychological adaptation.

In the Iranian context, emotion regulation has become a growing focus of psychological research, particularly in relation to infertility and emotional distress. Studies on infertile women have revealed that emotional dysregulation significantly mediates the relationship between psychological flexibility and loneliness (Shabannejad et al., 2021), and that therapeutic interventions based on acceptance and compassion approaches can improve emotion regulation and marital satisfaction in this group (Yadolahi et al., 2025). These findings highlight the importance of emotion regulation as a central mechanism linking personality variables and coping to psychological well-being among infertile women.

Despite the accumulating evidence, there is still limited research examining the **integrative model** that links internal locus of control, emotion-focused coping strategies, and difficulties in emotion regulation in infertile women. Previous studies have tended to examine these variables separately or in non-clinical populations. However, infertility represents a unique psychological condition characterized by chronic stress, uncertainty, and perceived lack of control, making it a critical context for testing such a model (Roushanzamir Madbari, 2018). Understanding how

internal locus of control influences emotion regulation through coping mechanisms can provide valuable insights for designing targeted psychological interventions aimed at improving emotional adjustment in infertile women (Barden et al., 2024; Villacura-Herrera et al., 2025).

Therefore, based on the theoretical framework and previous empirical evidence, the present study aims to predict difficulties in emotion regulation based on internal locus of control with the mediating role of emotion-focused coping strategies among infertile women in Tehran.

2. Methods and Materials

2.1. Study design and Participant

The present research employed a descriptive-correlational design aimed at examining the predictive role of internal locus of control in difficulties in emotion regulation, with the mediating role of emotion-focused coping strategies among infertile women. The statistical population consisted of all infertile women who referred to infertility treatment centers in Tehran during the year 2025. Based on the Krejcie and Morgan (1970) sample size determination table, a sample of 400 participants was selected to ensure adequate statistical power. Participants were chosen through convenience sampling from several major infertility centers across different districts of Tehran. Inclusion criteria were: confirmed medical diagnosis of infertility, being married, willingness to participate, and absence of any severe psychiatric disorder. All participants completed the standardized questionnaires including the Difficulties in Emotion Regulation Scale (DERS), Rotter's Internal-External Locus of Control Scale, and Coping Inventory for Stressful Situations (CISS). Prior to data collection, informed consent was obtained, and ethical principles such as confidentiality and voluntary participation were observed throughout the study.

2.2. Measures

To measure the dependent variable, difficulties in emotion regulation, the Difficulties in Emotion Regulation Scale (DERS) developed by Gratz and Roemer (2004) was used. This scale is one of the most widely used instruments in the field of emotion regulation and consists of 36 items rated on a five-point Likert scale ranging from "almost never = 1" to "almost always = 5." The DERS includes six subscales assessing different facets of emotion regulation difficulties: (1) non-acceptance of emotional responses, (2)

difficulties engaging in goal-directed behavior, (3) impulse control difficulties, (4) lack of emotional awareness, (5) limited access to emotion regulation strategies, and (6) lack of emotional clarity. Higher scores indicate greater difficulties in emotion regulation. Gratz and Roemer reported a Cronbach's alpha of 0.93 for the total scale and between 0.80 and 0.89 for the subscales, confirming strong internal consistency. The Persian version of the DERS has been translated, adapted, and validated in Iranian studies, showing good construct validity and reliability, with Cronbach's alpha coefficients ranging from 0.85 to 0.91.

To assess the variable internal locus of control, the Rotter's Internal-External Locus of Control Scale developed by Julian Rotter (1966) was used. This instrument consists of 29 dichotomous items, of which six are filler items designed to control for social desirability and response bias. Respondents select one of two statements in each item that best reflects their personal belief. The scale measures locus of control along a continuum from internal to external, with lower scores indicating a stronger internal locus of control and higher scores indicating a more external orientation. The Rotter scale has been extensively used in studies of personality, motivation, and health psychology. Reported test-retest reliability coefficients range from 0.65 to 0.79, and Cronbach's alpha is approximately 0.70, indicating acceptable reliability. The Persian version has been translated and adapted by Iranian researchers, demonstrating satisfactory content and construct validity in local contexts.

To measure the variable emotion-focused coping strategies, the Coping Inventory for Stressful Situations (CISS) developed by Endler and Parker (1990) was used. This standardized instrument assesses individual coping styles in stressful situations and contains 48 items rated on a five-point Likert scale ranging from "not at all = 1" to "very much = 5." The CISS comprises three primary subscales: (1) problem-focused coping, which involves logical problem-solving and active control of stressors; (2) emotion-focused coping, which reflects emotional responses and affective reactions to stress; and (3) avoidance-oriented coping, which includes two secondary subscales—"distraction" and "social diversion." Each subscale is scored separately, with higher scores indicating greater use of that coping style. Endler and Parker reported Cronbach's alpha coefficients between 0.80 and 0.92 for the subscales, confirming excellent internal consistency. The Persian version of the CISS has been translated, standardized, and validated in various Iranian studies, showing strong content, construct, and convergent validity. This tool is widely recognized for its reliability and

its ability to differentiate between emotional, problem-oriented, and avoidance coping strategies in psychological and clinical research.

2.3. Data Analysis

Data were analyzed using SPSS version 27 and AMOS version 21. First, descriptive statistics including mean, standard deviation, frequency, and percentage were calculated to summarize participants' demographic characteristics and study variables. To examine the relationships between the main variables, Pearson correlation coefficients were computed between difficulties in emotion regulation and each of the independent variables (internal locus of control and emotion-focused coping strategies). Furthermore, a structural equation modeling (SEM) approach was used to test the hypothesized mediational model, assessing both direct and indirect effects of internal locus of control on difficulties in emotion regulation through emotion-focused coping strategies.

Table 1

Descriptive Statistics of Research Variables (N = 400)

Variable	Mean (M)	Standard Deviation (SD)	Minimum	Maximum
Difficulties in Emotion Regulation	97.43	12.57	65	128
Internal Locus of Control	18.92	4.83	8	28
Emotion-Focused Coping Strategies	61.37	9.41	39	83

Table 1 shows the descriptive statistics of the main study variables. The mean score for difficulties in emotion regulation was 97.43 (SD = 12.57), suggesting that infertile women in the sample experienced a moderate to high level of emotional regulation difficulty. The mean score for internal locus of control was 18.92 (SD = 4.83), indicating a relatively balanced control orientation leaning slightly toward internality. The mean score for emotion-focused coping strategies was 61.37 (SD = 9.41), reflecting frequent use of emotional coping in dealing with stress associated with infertility. The standard deviations across variables suggest sufficient variability for subsequent analyses.

Before conducting inferential analyses, the assumptions of normality, linearity, homoscedasticity, and absence of

Model fit indices such as χ^2/df , GFI, AGFI, CFI, TLI, and RMSEA were evaluated to determine the adequacy of the proposed model.

3. Findings and Results

Of the 400 infertile women who participated in the study, 61.8% (n = 247) were aged between 30 and 39 years, 25.5% (n = 102) were aged between 20 and 29 years, and 12.7% (n = 51) were aged 40 years and above. Regarding educational level, 37.2% (n = 149) had a bachelor's degree, 34.5% (n = 138) had completed high school, 20.8% (n = 83) held an associate diploma, and 7.5% (n = 30) had postgraduate education. In terms of employment status, 46.5% (n = 186) were homemakers, 33.7% (n = 135) were employed in the public sector, and 19.8% (n = 79) were self-employed. The mean duration of infertility was 5.84 years (SD = 2.17). These demographic data suggest a relatively diverse sample in terms of age, education, and occupational background.

multicollinearity were examined and confirmed. The Kolmogorov-Smirnov test indicated that all main variables had nonsignificant results (p-values between 0.072 and 0.128), confirming normal distribution. Scatterplots demonstrated a linear relationship between variables, and Levene's test for homogeneity of variances was nonsignificant ($F = 1.24$, $p = 0.26$). Multicollinearity diagnostics showed tolerance values above 0.73 and VIF values below 1.37, indicating no multicollinearity issues. Additionally, skewness and kurtosis coefficients for all variables ranged between -0.78 and +0.84, confirming acceptable univariate normality. Therefore, all assumptions required for correlation and structural equation modeling analyses were adequately met.

Table 2

Pearson Correlation Coefficients Between Research Variables (N = 400)

Variables	1	2	3
1. Difficulties in Emotion Regulation	—		
2. Internal Locus of Control	-.48 (p < .001)	—	

3. Emotion-Focused Coping Strategies	.42 (p < .001)	-.36 (p < .001)	—
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Table 2 presents the Pearson correlation coefficients among the main study variables. A significant negative correlation was found between internal locus of control and difficulties in emotion regulation ($r = -.48$, $p < .001$), indicating that higher levels of internal control are associated with lower emotional dysregulation. There was also a significant positive correlation between emotion-focused

coping strategies and difficulties in emotion regulation ($r = .42$, $p < .001$), suggesting that higher use of emotional coping relates to more difficulties in regulating emotions. Furthermore, internal locus of control correlated negatively with emotion-focused coping strategies ($r = -.36$, $p < .001$), indicating that individuals with higher internal control tend to use emotion-focused coping less frequently.

Table 3

Goodness-of-Fit Indices for the Structural Equation Model

Fit Index	χ^2	df	χ^2/df	GFI	AGFI	CFI	TLI	RMSEA
Model	162.47	94	1.73	0.94	0.91	0.96	0.95	0.042

As shown in Table 3, the fit indices indicate that the proposed structural model provides an acceptable fit to the data. The ratio of chi-square to degrees of freedom ($\chi^2/df = 1.73$) was below the recommended threshold of 3, suggesting good model fit. The Goodness-of-Fit Index (GFI = 0.94) and Adjusted Goodness-of-Fit Index (AGFI = 0.91) both exceeded 0.90, while the Comparative Fit Index (CFI =

0.96) and Tucker-Lewis Index (TLI = 0.95) were above 0.95, confirming strong comparative fit. The Root Mean Square Error of Approximation (RMSEA = 0.042) was below 0.05, further indicating excellent fit between the hypothesized model and observed data. Collectively, these indices demonstrate that the structural equation model is statistically sound and well-specified.

Table 4

Direct, Indirect, and Total Effects Between Research Variables

Path	b	S.E	β	p	Effect Type
Internal Locus of Control → Emotion-Focused Coping	-0.47	0.09	-0.36	<.001	Direct
Emotion-Focused Coping → Difficulties in Emotion Regulation	0.53	0.11	0.38	<.001	Direct
Internal Locus of Control → Difficulties in Emotion Regulation	-0.41	0.10	-0.33	<.001	Direct
Internal Locus of Control → Difficulties in Emotion Regulation (via Emotion-Focused Coping)	-0.25	0.07	-0.14	<.01	Indirect
Internal Locus of Control → Difficulties in Emotion Regulation (Total Effect)	-0.66	0.12	-0.47	<.001	Total

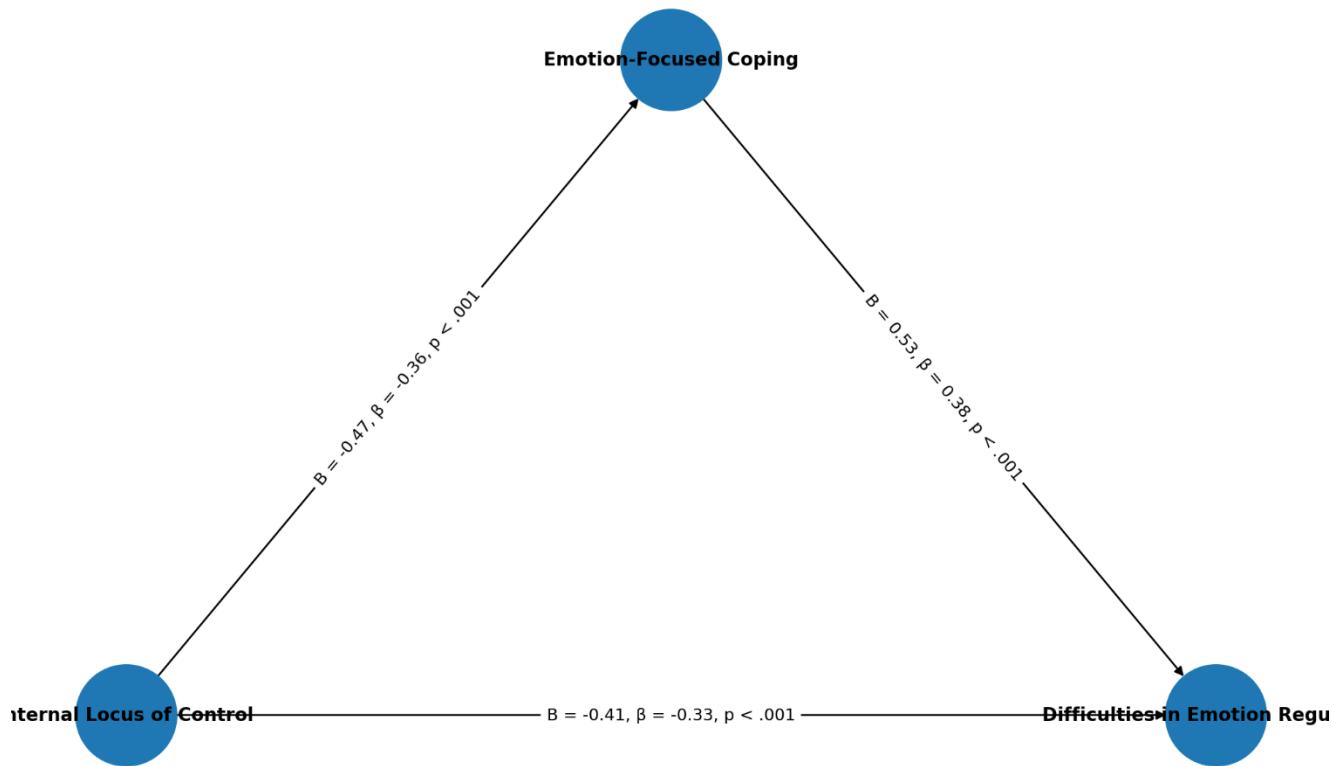
Table 4 summarizes the path coefficients estimated in the structural equation model. The direct effect of internal locus of control on emotion-focused coping was negative and significant ($\beta = -.36$, $p < .001$), indicating that women with stronger internal control beliefs tended to use emotion-focused coping strategies less frequently. The direct effect of emotion-focused coping on difficulties in emotion regulation was positive and significant ($\beta = 0.38$, $p < .001$), suggesting that higher reliance on emotional coping predicts greater emotional dysregulation. Additionally, internal locus

of control had a significant direct negative effect on difficulties in emotion regulation ($\beta = -0.33$, $p < .001$). Importantly, a significant indirect effect ($\beta = -0.14$, $p < .01$) was observed for the mediational path through emotion-focused coping, confirming partial mediation. The total effect ($\beta = -0.47$, $p < .001$) indicates that internal locus of control contributes substantially to reducing emotional regulation difficulties both directly and indirectly via coping processes.

Figure 1

Final Model of the Study

Structural Model: Internal Locus of Control, Emotion-Focused Coping, and Difficulties in Emotion Regulation



4. Discussion and Conclusion

The findings of this study revealed significant relationships between the variables of interest—*internal locus of control*, *emotion-focused coping strategies*, and *difficulties in emotion regulation*—among infertile women in Tehran. Specifically, the results demonstrated that an internal locus of control had a significant negative correlation with *difficulties in emotion regulation*, suggesting that women who perceive greater control over life events experience fewer challenges in managing their emotional responses. Moreover, *emotion-focused coping strategies* played a significant mediating role in this relationship, indicating that internal control beliefs promote the use of adaptive emotional coping responses, which in turn facilitate better emotion regulation. The structural equation model (SEM) confirmed that internal locus of control exerts both direct and indirect effects on emotion regulation through coping mechanisms, thereby supporting the proposed mediational framework.

These findings are consistent with a substantial body of research emphasizing the influence of control orientation on emotional and behavioral adjustment. Individuals with an internal locus of control tend to perceive themselves as

capable of influencing outcomes, which fosters self-efficacy and proactive coping in stressful contexts (Karaman & Watson, 2017). This perception of control enables individuals to interpret stressors as manageable rather than overwhelming, thereby reducing emotional reactivity and improving regulation capacities. The observed inverse association between internal locus of control and emotion dysregulation aligns with findings from Besharat et al., who reported that children with a more internal control orientation exhibited greater emotional stability and lower tendencies toward rumination and distress (Besharat et al., 2018). Similarly, Ghorbani et al. found that in substance-dependent individuals, internal locus of control was significantly related to higher cognitive self-control and more effective emotional regulation (Ghorbani et al., 2017). Collectively, these studies underscore the adaptive nature of internal control beliefs across both clinical and nonclinical populations.

The mediating effect of *emotion-focused coping strategies* found in this study further clarifies the mechanism through which control beliefs influence emotional functioning. Individuals who possess an internal locus of control are more likely to employ active coping mechanisms, including constructive emotion management strategies such as reappraisal, acceptance, and emotional awareness

(Masaed, 2013). In contrast, those with an external locus of control often rely on avoidance or denial, which can intensify emotional dysregulation. This study's results align with previous research indicating that locus of control predicts coping style selection and that coping mediates the relationship between perceived control and psychological adjustment (Åsberg & Renk, 2012). For instance, Åsberg and Renk found that women with internal control orientations demonstrated better adjustment under stressful circumstances due to their reliance on problem-focused and adaptive emotion-focused coping (Åsberg & Renk, 2012). Likewise, Darshani emphasized that personality type and locus of control collectively influence stress responses, where internalizers exhibit greater emotional resilience and conflict management capacities compared to externalizers (Darshani, 2014).

In the context of infertility, the implications of these relationships are particularly salient. Infertility is characterized by uncertainty, perceived loss of control, and persistent emotional distress. As such, women with an internal locus of control may experience reduced helplessness and greater psychological adjustment due to their belief in personal agency and capacity to influence treatment outcomes (Roushanzamir Madbari, 2018). This sense of agency facilitates adaptive emotional responses, enabling them to cope with the cyclical nature of treatment success and failure. Conversely, those who attribute infertility outcomes to fate, luck, or divine will—characteristic of an external locus of control—tend to experience emotional instability, heightened anxiety, and difficulties in regulating negative affect. The current findings thus support the notion that internal control orientation functions as a psychological resource that mitigates emotional dysregulation in stressful life conditions (Sukarno et al., 2022).

Moreover, the mediating role of *emotion-focused coping strategies* underscores the importance of emotional processes in bridging cognitive beliefs and psychological adjustment. This result is in harmony with findings from Dyar et al., who demonstrated that emotion regulation strategies and coping self-efficacy moderated the effects of daily stigma on affect among gender-diverse individuals (Dyar et al., 2024). Similarly, Masters et al. showed that adolescents with greater emotion regulation skills employed more adaptive coping behaviors in stressful social situations, whereas those with emotion dysregulation tended to engage in avoidance or rumination (Masters et al., 2023). In the present study, infertile women with internal control beliefs

might have developed a more constructive repertoire of emotion-focused coping responses—such as seeking emotional support and reinterpreting stress meaningfully—which, in turn, facilitated emotion regulation. This interpretation aligns with cognitive-behavioral perspectives suggesting that control beliefs guide coping appraisals and emotional processing (Coyne & Thompson, 2011).

The relationship between emotion regulation and coping identified in this study is consistent with contemporary frameworks that view these constructs as overlapping yet distinct processes contributing to psychological adaptation. As Simonić et al. noted, difficulties in emotion regulation are associated with maladaptive coping and greater vulnerability to substance misuse and emotional distress (Simonić et al., 2024). Similarly, Barden et al. highlighted that maladaptive emotion regulation and poor dyadic coping predicted increased relationship distress and psychological maladjustment among trauma-exposed individuals (Barden et al., 2024). These findings suggest that the inability to regulate emotional responses effectively may not only amplify internal distress but also impair social relationships and marital functioning—issues particularly relevant for infertile women, whose emotional distress often intersects with relational strain.

Furthermore, this study's results reinforce the well-documented association between emotional regulation and psychological health across diverse contexts. For example, Singh et al. found that internal locus of control moderated the relationship between academic burnout and student engagement, indicating that control orientation can buffer the detrimental effects of stress on psychological functioning (Singh et al., 2021). Likewise, Sari et al. emphasized that targeted interventions designed to enhance emotion regulation capacities could lead to significant improvements in emotional stability and behavioral adjustment among children with autism (Sari et al., 2024). Applying these insights to infertility, it becomes evident that interventions focusing on strengthening emotional regulation and internal control beliefs may contribute to better emotional outcomes and resilience in women undergoing fertility treatment.

Another critical aspect of the findings concerns the cognitive-behavioral underpinnings of the relationship between control beliefs and emotion regulation. As noted by Rizza et al., locus of control significantly affects emotional distress and disability levels in patients with chronic illness, implying that cognitive appraisals about control are deeply tied to emotional well-being (Rizza et al., 2017). Infertility, as a prolonged and uncertain condition, mirrors this chronic

illness dynamic. Women who attribute control internally can reframe their experiences in adaptive ways, reducing the perceived threat of failure and maintaining hope and motivation throughout treatment cycles. Conversely, those with an external orientation may engage in maladaptive appraisals, increasing emotional reactivity and stress. This cognitive process highlights how beliefs about control shape both coping and emotional outcomes in infertility.

The mediational relationship found in the present study also aligns with prior findings emphasizing that coping serves as a functional pathway linking personality variables to emotional outcomes. For example, Gaus found that female professionals with higher internal control orientations experienced lower job stress due to the use of proactive coping behaviors (Gaus, 2014). Similarly, Masaed identified positive correlations between adaptive coping strategies and internal control beliefs, confirming that control orientations influence how individuals confront stressful events (Masaed, 2013). In infertile women, emotional coping functions as an intermediary channel through which internal control beliefs translate into effective emotion regulation, reinforcing the interdependence of these constructs.

Additionally, the findings correspond with those of Yadolahi et al., who found that interventions based on acceptance and compassion approaches significantly enhanced emotion regulation and marital satisfaction in infertile women (Yadolahi et al., 2025). Their study, similar in population, supports the current results by indicating that fostering emotional awareness and acceptance—core components of adaptive coping—can alleviate emotional dysregulation. Furthermore, Shabannejad et al. demonstrated that emotion regulation difficulties mediated the relationship between psychological flexibility and loneliness in infertile women, echoing the mediational role identified in the present research (Shabannejad et al., 2021). Together, these findings contribute to a coherent framework in which internal control, emotional coping, and regulation capacity collectively determine the psychological adjustment of infertile women.

Theoretically, the results support integrative models of emotional adjustment that emphasize the interaction between cognitive control beliefs and emotional processes. According to social-cognitive and emotion regulation theories, perceived controllability enhances self-regulation capacities by promoting adaptive appraisal patterns and fostering resilience in the face of stress (Coyne & Thompson, 2011). Internal control beliefs thus serve as cognitive anchors that support adaptive coping and

emotional balance. Moreover, these findings extend existing frameworks by empirically validating the mediating role of emotion-focused coping strategies, suggesting that control beliefs influence emotional functioning not directly but through dynamic emotional mechanisms (Dyar et al., 2024; Masters et al., 2023).

Overall, the present findings enrich the growing literature that links personality constructs, coping mechanisms, and emotional regulation within vulnerable populations. The evidence suggests that fostering internal control beliefs and promoting constructive emotional coping strategies may significantly enhance psychological resilience among infertile women. This integrative understanding has both theoretical and practical implications for developing targeted therapeutic interventions that address both cognitive and emotional dimensions of infertility-related distress (Villacura-Herrera et al., 2025).

5. Limitations and Suggestions

Despite its valuable contributions, this study is not without limitations. First, the cross-sectional design precludes any definitive causal inferences regarding the directionality of the relationships among locus of control, coping strategies, and emotion regulation difficulties. Future longitudinal or experimental studies would be better suited to explore causal pathways. Second, the data were self-reported, which may be subject to social desirability bias and participants' self-perception errors, especially given the sensitive nature of infertility. Third, the study was conducted exclusively among infertile women in Tehran, limiting the generalizability of findings to men, couples, or infertile populations in other cultural or socioeconomic contexts. Moreover, emotional and cultural factors specific to Iranian society—such as stigma surrounding infertility—may have influenced participants' responses. Finally, the study did not differentiate between primary and secondary infertility or account for the duration and stage of treatment, which may moderate emotional experiences and coping responses.

Future studies should adopt longitudinal and cross-cultural designs to explore the temporal and cultural stability of the relationships identified in this study. Researchers are encouraged to examine the moderating roles of demographic and clinical variables, such as duration of infertility, previous treatment failures, or partner support, to refine the proposed model. In addition, qualitative research could deepen understanding of the subjective experiences underlying emotion regulation and perceived control among

infertile women. It would also be valuable to integrate neuropsychological or physiological measures (e.g., heart rate variability, cortisol levels) to assess emotional regulation objectively. Lastly, future investigations could test intervention-based models, such as cognitive-behavioral or acceptance-based programs, to determine whether enhancing internal locus of control and emotion-focused coping can causally improve emotional regulation and psychological well-being.

In clinical settings, psychological counseling for infertile women should incorporate psychoeducational programs that enhance awareness of control beliefs and promote adaptive emotional coping techniques. Practitioners may design emotion regulation training sessions that include mindfulness, cognitive reappraisal, and acceptance-based methods to help women manage distress during infertility treatments. Support groups facilitated by psychologists could encourage peer sharing and normalization of emotional struggles, thereby strengthening adaptive coping and reducing isolation. Fertility clinics should also consider integrating psychological screening and intervention services as part of comprehensive infertility care. Such interventions not only enhance emotional resilience but may also improve treatment adherence and overall quality of life for infertile women.

Authors' Contributions

Authors contributed equally 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

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration 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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