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Comparison of the Effectiveness of Emotion-Focused Therapy and Cognitive-Behavioral Therapy on Family Functioning and Attitudes Toward Extramarital Relationships in Infertile Marginalized Women in Tehran

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A B S T R A C T

Objective: This study aimed to compare the effectiveness of Emotion-Focused Therapy (EFT) and Cognitive-Behavioral Therapy (CBT) on family functioning and attitudes toward extramarital relationships in infertile marginalized women in Tehran.

Methods and Materials: The research method was quasi-experimental with a pretest–posttest design, a two-month follow-up, and a control group. The statistical population included all infertile women who attended the clinic of Dr. Elina Bayramzadeh (gynecologist, obstetrician, and infertility specialist) in the second half of 2024. Out of 120 screened individuals, 45 participants were randomly assigned to three groups (15 in each): two experimental groups (EFT and CBT) and one control group. Research instruments included the Whatley Attitudes Toward Infidelity Scale (2006) and the Family Assessment Device by Epstein et al. (1983). Data were analyzed using mixed-design ANOVA and Bonferroni post hoc tests in SPSS-26.

Findings: Findings indicated that both interventions significantly improved family functioning and reduced attitudes favorable to extramarital relationships ($p < .05$). However, Emotion-Focused Therapy demonstrated greater effectiveness compared to Cognitive-Behavioral Therapy ($p < .002$). The effect size of EFT for family functioning ($\eta^2 = .68$) and attitudes toward extramarital relationships ($\eta^2 = .81$) was significantly larger than that of CBT. Moreover, the effects of both interventions remained stable at the follow-up stage.

Conclusion: It was concluded that both therapeutic approaches are effective; however, Emotion-Focused Therapy holds superiority, particularly in enhancing emotional and relational variables. These findings can inform the design of targeted psychological interventions for infertile marginalized women.

Keywords: *Emotion-Focused Therapy (EFT), Cognitive-Behavioral Therapy (CBT), family functioning, attitudes toward extramarital relationships, infertility*

1. Introduction

Infertility represents a major life stressor with profound psychosocial implications, particularly among women who may experience diminished self-esteem, marital dissatisfaction, and increased vulnerability to relational instability (Akintayo et al., 2022; Sharma et al., 2022). The inability to conceive is not merely a medical condition but an existential challenge that affects identity, intimate bonds, and cultural belonging (Rezai et al., 2021; Sharma et al., 2022). Research has consistently shown that infertile women experience higher levels of psychological distress, including depression, anxiety, and feelings of personal inadequacy (Kremer et al., 2023; Maadi et al., 2022; Nawaz et al., 2025). These emotional struggles often spill over into marital life, disrupting patterns of communication, emotional support, and sexual intimacy (Bakhshipoor et al., 2012; Zarei, 2019). In some cases, infertility-related stress can contribute to maladaptive coping mechanisms such as permissive attitudes toward extramarital relationships, which threaten marital stability and emotional security (Labrecque & Whisman, 2020; Le et al., 2024; Tajbakhsh, 2021).

Family functioning is a multidimensional construct encompassing problem solving, communication, affective involvement, roles, and behavioral control (Yousefi, 2012). Healthy family systems maintain adaptive patterns even under stress, but infertility can disrupt these processes, leading to conflict and disengagement (Bakhshipoor et al., 2012; Hamid et al., 2021). Research shows that women facing infertility often report lower marital adaptability and relational quality compared to fertile women (Maadi et al., 2022; Zarei, 2019). The distress associated with reproductive failure may also fuel destructive relational schemas, erode trust, and increase the cognitive accessibility of alternatives to the primary relationship (Labrecque & Whisman, 2020; Tajbakhsh, 2021). Therefore, interventions that address both the emotional and cognitive mechanisms underlying these relational disruptions are urgently needed.

Emotion-Focused Therapy (EFT) and Cognitive-Behavioral Therapy (CBT) have emerged as two evidence-based modalities capable of mitigating the psychological and relational burdens of infertility (Dattilio, 2009; Furrow et al., 2019; Greenman & Johnson, 2013). EFT is grounded in attachment theory and experiential processes; it seeks to identify and transform maladaptive emotional responses, restructure negative interaction cycles, and strengthen secure bonds (Furrow et al., 2019; Greenman & Johnson, 2013; Marren et al., 2022). This approach has been successfully adapted across cultures and relational contexts, including couples struggling with betrayal or disability (Allan et al., 2023; Zhao et al., 2025). Through deep emotional processing, clients can access vulnerable feelings, revise insecure attachment narratives, and create new patterns of safe engagement (Marren et al., 2022; Radosavljevic, 2025). Importantly, EFT is not limited to couples; its principles have been extended to individuals and families, providing flexibility for contexts where one partner may be absent (Ghaforian Mohabi et al., 2025; Smith et al., 2023).

CBT, on the other hand, emphasizes the restructuring of dysfunctional cognitions and maladaptive coping strategies that sustain distress (Dattilio, 2009; Reuman & Thompson-Hollands, 2025). In infertility, negative automatic thoughts about self-worth, control, and relational security frequently exacerbate emotional pain and can shape permissive attitudes toward extramarital involvement (Kiai Rad et al., 2020; Le et al., 2024). CBT aims to help individuals identify these distortions, challenge unrealistic beliefs, and build effective problem-solving and emotion regulation skills (Hamid et al., 2021; Reuman & Thompson-Hollands, 2025). Techniques such as cognitive restructuring, behavioral experiments, and relaxation training have been found effective in reducing depressive symptoms and infertility-related stress (Forough Amiri, 2022; Nawaz et al., 2025; Vioreanu, 2023; Wang et al., 2023). Recent advances also highlight the integration of emotional processing strategies into CBT to address deeper affective needs (Reuman & Thompson-Hollands, 2025; Thoma & Greenberg, 2015).

Despite the evidence for EFT and CBT separately, comparative research on their relative effectiveness for infertile women—especially those in marginalized and socioeconomically disadvantaged communities—is limited. Marginalized women often encounter additional psychosocial stressors, including economic hardship, social stigma, and restricted access to mental health resources (Gouveia et al., 2024; Meyer et al., 2023). These factors can intensify relational disconnection and vulnerability to infidelity-related cognitions (Gouveia et al., 2024; Labrecque & Whisman, 2020). In such populations, selecting the most impactful intervention becomes a crucial public health and clinical question. Understanding whether an emotionally focused approach that targets attachment wounds or a cognitively oriented program that challenges maladaptive beliefs leads to greater improvement in family functioning and extramarital attitudes can inform culturally sensitive and cost-effective therapeutic planning (Allan et al., 2023; Shahabi & Sanagoi Maharrar, 2019).

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Previous studies indicate promising effects of EFT on relationship quality and marital resilience among distressed couples (Furrow et al., 2019; Shahabi & Sanagoi Maharrar, 2019). EFT's ability to rebuild emotional security may be particularly beneficial for infertile women, who often experience relational isolation and heightened fear of abandonment (Ghaforian Mohabi et al., 2025; Greenman & Johnson, 2013). Research also suggests that EFT can reduce permissive attitudes toward infidelity by fostering trust and emotional closeness (Shahabi & Sanagoi Maharrar, 2019; Zhao et al., 2025). At the same time, CBT has demonstrated significant success in reducing depression, anxiety, and maladaptive coping among infertile women (Forough Amiri, 2022; Nawaz et al., 2025; Wang et al., 2023). Studies show that CBT enhances adaptive thinking and communication, potentially improving family functioning and discouraging infidelity-related ideation (Hamid et al., 2021; Kiai Rad et al., 2020).

However, there is a theoretical rationale for expecting EFT to outperform CBT on relational outcomes. EFT directly targets emotional accessibility and responsiveness—the core of secure attachment—which underlies marital trust and resilience (Furrow et al., 2019; Greenman & Johnson, 2013). In contrast, while CBT helps manage negative cognitions and stress responses, it may not fully resolve deep-seated attachment fears or facilitate emotional bonding (Thoma & Greenberg, 2015). Integrative models increasingly advocate blending the strengths of both approaches, but empirical comparisons remain scarce, especially in non-Western and low-resource settings (Allan et al., 2023; Thoma & Greenberg, 2015).

In the Iranian context, infertility carries strong social stigma and can severely threaten marital stability (Maadi et al., 2022; Rezai et al., 2021). Studies have documented that infertile women may internalize failure, experience marital disengagement, and be vulnerable to maladaptive coping patterns (Ahramian et al., 2022; Kiai Rad et al., 2020). Given these cultural pressures, emotion-focused interventions may help address shame and relational alienation, while CBT can help challenge catastrophic beliefs and improve coping with infertility-related stress (Dattilio, 2009; Forough Amiri, 2022). Some Iranian studies have validated key instruments such as the Attitude Toward Infidelity Scale (Abdollahzadeh, 2010; Seyed Ali Tabr et al., 2015) and the Family Assessment Device (Yousefi, 2012), supporting rigorous local measurement of these constructs.

Another important factor is cultural adaptation. Recent research shows that culturally attuned EFT can respect local family norms and still foster emotional openness (Allan et al., 2023; Zhao et al., 2025). Likewise, CBT protocols have been adapted to account for infertility-specific beliefs and social contexts (Forough Amiri, 2022; Hamid et al., 2021). Yet marginalized women often face barriers such as limited health literacy and access, underscoring the need for structured, practical, and well-tested interventions (Gouveia et al., 2024; Meyer et al., 2023).

From a clinical research standpoint, directly comparing EFT and CBT in this population can advance precision mental health care. Such comparison allows practitioners to align treatment strategies with the primary drivers of distress—whether these are emotional wounds and insecure attachment or distorted cognitions and problem-solving deficits (Radosavljevic, 2025; Reuman & Thompson-Hollands, 2025). It also informs prevention of extramarital involvement by addressing both the affective vulnerability and cognitive justification pathways that can erode marital stability (Labrecque & Whisman, 2020; Le et al., 2024; Tajbakhsh, 2021).

In summary, infertility disrupts family functioning and may heighten susceptibility to extramarital relational risk through complex emotional and cognitive mechanisms. Both EFT and CBT have empirical support for addressing these difficulties, but few studies have compared their relative impact among socioeconomically marginalized infertile women. Understanding which approach better improves family dynamics and reduces permissive attitudes toward infidelity can guide culturally sensitive, cost-effective interventions and inform clinical decision-making (Dattilio, 2009; Furrow et al., 2019; Greenman & Johnson, 2013; Marren et al., 2022). This study aims to address this gap by systematically examining and comparing the effectiveness of Emotion-Focused Therapy and Cognitive-Behavioral Therapy on family functioning and attitudes toward extramarital relationships among infertile marginalized women in Tehran.

2. Methods and Materials

2.1. Study Design and Participants

This study was applied in aim and quasi-experimental in methodology, employing a pretest–posttest design with a control group and a two-month follow-up period. The statistical population consisted of all infertile women who visited the clinic of Dr. Elina Bayramzadeh (gynecologist, obstetrician, and infertility specialist) in Tehran during the second half of 2024. Based on estimates, the clinic's

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capacity, and general infertility statistics in Iran, the population size was approximated at about 9,000 individuals. According to semi-experimental research standards and based on the recommendations of Delavar (2012), the sample size was determined to be 15 participants per group.

Accordingly, 45 infertile women who met the inclusion criteria were selected. Initially, sampling was done using a convenience (voluntary) method, and then, to screen participants, the Attitudes Toward Infidelity Scale (Whatley, 2008) and the Family Assessment Device (Epstein et al., 1983) were administered. Individuals who showed vulnerability or issues in either component (attitudes toward extramarital relationships or family functioning) based on the cutoff points were identified and selected. From the 120 women who qualified during the screening process, 45 were randomly chosen and, after signing informed consent forms, were randomly assigned to three groups (15 each).

The first experimental group received Emotion-Focused Therapy (10 sessions of 90 minutes each), and the second experimental group received Cognitive-Behavioral Therapy (10 sessions of 90 minutes each). The control group did not receive any intervention. After completing the therapeutic sessions, a posttest and a two-month follow-up were conducted for all groups. Data were collected through in-person, online, and postal methods, and research findings were reported back to participants. The control group received the intervention after the completion of the study. To increase participation, reminder calls and proper scheduling were implemented.

Inclusion criteria were: willingness and written informed consent to participate, medical diagnosis of infertility, living in marginalized areas of Tehran, at least basic literacy (reading and writing), and an age range of 25–50 years. Exclusion criteria included: absence from more than one-third of therapy sessions, any disability or psychiatric disorder, simultaneous participation in other educational interventions, and incomplete or invalid questionnaire responses.

2.2. Measures

Attitudes Toward Infidelity Scale (ATIS): Designed and developed by Mark Whatley (2008), translated and validated in Persian by Abdollahzadeh (2010). This 12-item scale measures individuals' attitudes toward marital infidelity on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree). The total score ranges from 12 (highly negative attitude) to 84 (highly positive attitude). A score of 48 is considered the midpoint, indicating neutrality between acceptance and rejection of infidelity. Whatley (2008) reported acceptable validity and reliability for the scale, with Cronbach's alpha of .84, and a reliability range of .79 to .91 across studies, indicating good internal consistency. Abdollahzadeh (2010) reported a Cronbach's alpha of .84 in Iranian samples. Seyed Alitabar (2015) confirmed the scale's validity, reporting internal consistency between .81 and .90 and construct validity through subscale correlations ranging from .71 to .82.

Family Assessment Device (FAD): Developed by Nathan B. Epstein et al. (1983), the FAD contains 60 items assessing family functioning across six dimensions (problem solving, communication, roles, affective involvement, affective responsiveness, and behavior control), as well as an overall functioning score. It uses a 4-point Likert scale (1 = strongly agree to 4 = strongly disagree), with lower scores indicating healthier functioning. Epstein et al. (1983) reported internal consistency with Cronbach's alpha of .85 and test–retest reliability of .89 over three weeks in a sample of 233 participants. Creswell et al. (2012) reported Cronbach's alpha of .74 and split-half reliability of .75. In Iran, Hossein Chari et al. (2015) reported Cronbach's alpha of .76 for the total scale, while Yousefi (2012) reported internal consistency of .80 and internal validity of .89. Bakhshipour et al. (2012) reported Cronbach's alpha coefficients ranging from .72 to .92.

2.3. Interventions

The Emotion-Focused Therapy (EFT) intervention was implemented according to the treatment plan proposed by Greenman and Johnson (2013) in 10 structured sessions. The first session involved therapist–participant introductions, clarifying treatment goals, assessing each participant's emotional challenges related to infertility, and providing psychoeducation about common emotional experiences among infertile women. The second session focused on identifying interpersonal (marital) and intrapersonal (personality-based) problems and raising awareness about the negative impact of unresolved emotions. In the third session, participants collaboratively explored their primary relational concerns, identified maladaptive interaction patterns, uncovered attachment insecurities and fears, and were given emotional processing homework. The fourth session concentrated on reviewing the previous homework,

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emotionally reframing interactions, deepening emotional experience, and fostering new emotional responses between partners. The fifth and sixth sessions emphasized continued identification and expression of underlying emotions, deepening emotional engagement, exploring negative interaction cycles, clarifying emotional triggers, and increasing awareness of attachment needs. The seventh and eighth sessions involved helping participants express unmet needs and desires, restructure negative patterns into positive cycles, and discover alternative ways of resolving chronic relational issues. The ninth session focused on rebuilding sexual and nonsexual intimacy and enhancing new interactional methods. The final session summarized the therapy content, reinforced constructive and intimate dialogues, integrated positive interactional changes, and provided closure and support for maintaining healthy emotional and relational dynamics.

The Cognitive-Behavioral Therapy (CBT) intervention followed the structured program developed by Dattilio (2009) and was delivered over 10 sessions. The first session included establishing a supportive and empathetic environment, clarifying treatment goals, conducting a qualitative assessment of participants' current situation, explaining infertility-related stress, and administering the pretest. The second session involved identifying interpersonal and intrapersonal difficulties, emotional sharing about infertility-related distress, normalizing challenges, and psychoeducation on the adverse effects of these emotions. The third and fourth sessions addressed the impact of infertility on marital attitudes and extramarital relationship beliefs, taught communication and assertiveness skills, and introduced the concept of attribution and its effect on couple dynamics. The fifth session trained participants to recognize the link between thoughts, emotions, and triggering events, identify automatic dysfunctional thoughts about infertility, and understand how these influence negative emotional states and attitudes toward extramarital relationships. The sixth session introduced diaphragmatic breathing, guided imagery, and progressive muscle relaxation techniques. The seventh session targeted cognitive distortions specifically related to infertility and guided participants to challenge and replace irrational beliefs with healthier, rational alternatives. The eighth and ninth sessions built problem-solving skills, enhanced coping with automatic thoughts by confronting them with realistic evidence, and introduced additional CBT strategies to manage distress. The final session reviewed learned concepts, reinforced constructive changes, consolidated emotion regulation skills, and gathered participant feedback on therapy effectiveness regarding family functioning and attitudes toward extramarital relationships before conducting the posttest.

2.4. Data Analysis

In this study, the pretest and posttest data were analyzed using repeated measures ANOVA. Bonferroni post hoc tests were applied to compare the effectiveness between the experimental groups. All statistical analyses were conducted using SPSS version 26.

3. Findings and Results

This study was conducted on 45 infertile women (mean age = 39.086 ± 6.33 years) in three groups of 15 participants each (Emotion-Focused, Cognitive-Behavioral, and control). The largest age group across all participants was 35–40 years (33.34%). Regarding education level, 40% had a high school diploma, 26.67% held a bachelor's degree, and 20% held a master's degree. The duration of infertility was more than five years for 46.67% and between three to five years for 33.34% of participants. The mean duration of marriage was four years for 26.67% and less than two years for 24.44% of the participants. Economic status was reported as moderate in 37.78%, poor in 33.34%, and good in 28.89%. In terms of occupation, 55.56% were self-employed, 33.34% were unemployed, and 11.12% worked in government positions. Additionally, 60% reported non-consanguineous marriages, and 55.56% had a history of infertility treatment (such as IVF). One-way ANOVA showed no significant difference in the mean age among the three groups ($F = 0.768$, $p = .456$).

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Table 1

Descriptive indices of study variables

Component	Stage	Emotion-Focused Therapy M ± SD	Cognitive-Behavioral Therapy M ± SD	Control M ± SD
Problem Solving	Pretest	14.71 ± 2.89	14.73 ± 2.52	14.87 ± 2.40
	Posttest	19.67 ± 1.42	17.80 ± 2.10	14.00 ± 2.28
	Follow-up	18.50 ± 1.76	16.20 ± 2.03	14.27 ± 2.40
Communication	Pretest	14.93 ± 2.01	14.13 ± 2.11	14.80 ± 2.70
	Posttest	19.07 ± 2.36	17.01 ± 2.67	14.67 ± 2.52
	Follow-up	18.40 ± 1.68	16.27 ± 2.66	14.93 ± 2.58
Roles	Pretest	25.60 ± 3.75	24.09 ± 3.33	24.13 ± 3.33
	Posttest	32.67 ± 2.26	29.73 ± 2.79	24.60 ± 3.69
	Follow-up	31.40 ± 2.09	28.87 ± 3.88	24.47 ± 3.54
Affective Involvement	Pretest	12.71 ± 1.89	12.73 ± 2.40	12.50 ± 2.04
	Posttest	19.67 ± 1.42	16.80 ± 1.34	12.32 ± 2.89
	Follow-up	18.10 ± 1.76	15.20 ± 1.03	12.27 ± 2.65
Affective Responsiveness	Pretest	13.01 ± 2.56	13.13 ± 2.11	13.50 ± 2.01
	Posttest	19.91 ± 2.36	17.40 ± 2.67	13.67 ± 2.35
	Follow-up	18.40 ± 2.18	16.29 ± 2.66	13.93 ± 2.31
Behavior Control	Pretest	20.60 ± 2.75	20.09 ± 2.33	20.25 ± 2.54
	Posttest	27.67 ± 2.26	25.73 ± 2.79	20.60 ± 2.69
	Follow-up	26.40 ± 2.09	24.87 ± 2.88	20.47 ± 2.34
Overall Family Functioning	Pretest	25.71 ± 3.89	25.09 ± 3.40	25.87 ± 3.04
	Posttest	35.67 ± 3.42	31.98 ± 3.34	24.32 ± 3.75
	Follow-up	33.10 ± 3.76	30.22 ± 3.03	24.27 ± 3.55
Attitudes Toward Extramarital Relationships	Pretest	62.32 ± 5.40	60.73 ± 5.11	61.87 ± 5.99
	Posttest	40.19 ± 3.11	50.21 ± 4.77	60.11 ± 5.09
	Follow-up	38.28 ± 3.59	48.33 ± 4.44	60.27 ± 5.17

To examine the effects of Emotion-Focused Therapy (EFT) and Cognitive-Behavioral Therapy (CBT) on family functioning and attitudes toward extramarital relationships, repeated measures ANOVA was used. Prior to analysis, the assumptions of this statistical method were tested:

Normality of data distribution assessed using the Shapiro–Wilk test indicated W values between .559 and .941 for attitudes toward extramarital relationships and between .400 and .966 for family functioning, with significance levels greater than .05, confirming normal distribution. The Kolmogorov–Smirnov test supported these findings, showing Z-K values ranging from .132 to .978, all with $p > .05$.

One-way ANOVA was used to test group homogeneity at the pretest stage. Results showed no statistically significant differences between groups in family functioning ($F = 1.231$, $p = .245$) and attitudes toward extramarital relationships ($F = 0.653$, $p = .531$). These findings confirm that the groups were homogeneous at baseline. Since the assumptions of normality and homogeneity were mostly met, using parametric methods for data analysis was justified.

To compare the effectiveness of EFT and CBT on family functioning and attitudes toward marital infidelity in infertile women, a mixed-design (two-way repeated measures) ANOVA was conducted. The results are presented in Table 2, examining between-subject effects (group), within-subject effects (time), and the interaction of time × group.

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Table 2

Repeated measures ANOVA for family functioning and attitudes toward extramarital relationships

Variable	Source	SS	df	MS	F	p	η^2
Family Functioning	Group	1452.68	2	726.34	18.72	< .001	.47
	Time	3245.16	2	1622.58	89.43	< .001	.68
	Time × Group	1876.24	4	469.06	25.85	< .001	.55
	Error	1632.45	42	38.87	—	—	—
Attitudes Toward Extramarital Relationships	Group	892.46	2	446.23	15.37	< .001	.42
	Time	2843.72	2	1421.86	112.54	< .001	.73
	Time × Group	1568.33	4	392.08	31.04	< .001	.60
	Error	1218.94	42	29.02	—	—	—

The results in Table 2 for family functioning and attitudes toward extramarital relationships showed that both the main effect of time and the interaction effect of time × group were statistically significant ($p < .05$), indicating that at least one of the interventions had a meaningful impact on the studied variables.

For family functioning, the group effect was significant ($F = 18.72$, $\eta^2 = .47$), and for attitudes toward extramarital relationships, the group effect was also significant ($F = 15.37$, $\eta^2 = .42$). The significant time effect in family functioning ($F = 89.43$, $\eta^2 = .68$) and in attitudes toward extramarital relationships ($F = 112.54$, $\eta^2 = .73$) indicates notable changes across different measurement stages. Finally, the significant time × group interaction effect for family functioning ($F = 25.85$, $\eta^2 = .55$) and attitudes toward extramarital relationships ($F = 31.04$, $\eta^2 = .60$) shows that the pattern of changes differed among the groups ($p < .001$).

Table 3

Bonferroni Post Hoc Test Comparing the Effectiveness of the Interventions on Attitudes Toward Relationships at the Posttest

Variable	Group	Adjusted Posttest Mean	Standard Error	Between-Group Comparison	Mean Difference	p
Family Functioning	Emotion-Focused Therapy	35.67	0.87	Emotion-Focused vs. Control	+11.35	< .001
	Cognitive-Behavioral Therapy	31.98	0.89	Cognitive-Behavioral vs. Control	+7.66	< .001
	Control	24.32	0.88	Emotion-Focused vs. Cognitive-Behavioral	+3.69	.004
Attitudes Toward Extramarital Relationships	Emotion-Focused Therapy	40.19	0.95	Emotion-Focused vs. Control	−19.92	< .001
	Cognitive-Behavioral Therapy	50.21	0.97	Cognitive-Behavioral vs. Control	−9.90	< .001
	Control	60.11	0.99	Emotion-Focused vs. Cognitive-Behavioral	−10.02	< .001

The Bonferroni post hoc test results showed that both interventions significantly improved family functioning and reduced attitudes toward extramarital relationships ($p < .05$). In family functioning, Emotion-Focused Therapy demonstrated a significantly greater improvement (+11.35 points) compared to the control group ($p < .001$). In attitudes toward extramarital relationships, Emotion-Focused Therapy showed a significantly greater reduction (−19.92 points) compared to the control group ($p < .001$).

Cognitive-Behavioral Therapy also had a significant positive effect, increasing family functioning by +7.66 points and decreasing attitudes toward extramarital relationships by −9.90 points compared to the control group ($p = .001$). The direct comparison of the two interventions revealed that Emotion-Focused Therapy outperformed Cognitive-Behavioral Therapy with a significant mean difference of +3.69 in family functioning ($p = .004$) and −10.02 in attitudes toward extramarital relationships ($p = .001$).

To further assess the stability of the interventions' effectiveness over time on family functioning and attitudes toward extramarital relationships, paired time-series comparisons were conducted.

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Table 4

Pairwise Time-Series Comparisons of Family Functioning and Attitudes During the Follow-Up Period

Variable	Group	Time 1	Time 2	Mean Difference	p
Family Functioning	Emotion-Focused Therapy	Pretest – Posttest	+9.96	< .001	
		Pretest – Follow-up	+7.39	< .001	
		Posttest – Follow-up	−2.57	.132	
	Cognitive-Behavioral Therapy	Pretest – Posttest	+6.89	< .001	
		Pretest – Follow-up	+5.13	< .001	
		Posttest – Follow-up	−1.76	.215	
	Control	Pretest – Posttest	−1.55	.481	
		Pretest – Follow-up	−1.60	.472	
		Posttest – Follow-up	−0.05	.982	
Attitudes Toward Extramarital Relationships	Emotion-Focused Therapy	Pretest – Posttest	−22.13	< .001	
		Pretest – Follow-up	−24.04	< .001	
		Posttest – Follow-up	−1.91	.215	
	Cognitive-Behavioral Therapy	Pretest – Posttest	−10.52	< .001	
		Pretest – Follow-up	−12.40	< .001	
		Posttest – Follow-up	−1.88	.228	
	Control	Pretest – Posttest	−1.76	.483	
		Pretest – Follow-up	−1.60	.472	
		Posttest – Follow-up	+0.16	.896	

The pairwise time-series comparisons indicated that both interventions resulted in significant improvements in family functioning and significant reductions in attitudes toward extramarital relationships ($p < .001$). Emotion-Focused Therapy had a stronger sustained effect than Cognitive-Behavioral Therapy, with a +9.96 improvement at posttest and +7.39 at follow-up in family functioning compared to +6.89 and +5.13 for CBT.

Similarly, for attitudes toward extramarital relationships, EFT produced a larger reduction (−24.04 at follow-up) than CBT (−12.40 at follow-up). These findings show that the therapeutic gains from both approaches remained stable up to the follow-up stage, whereas the control group showed no significant change over time.

4. Discussion and Conclusion

The present study compared the effects of Emotion-Focused Therapy (EFT) and Cognitive-Behavioral Therapy (CBT) on family functioning and attitudes toward extramarital relationships among infertile marginalized women in Tehran. The results demonstrated that both interventions significantly improved family functioning and reduced permissive attitudes toward infidelity, but EFT showed stronger and more stable effects than CBT. These findings contribute to the growing body of evidence that psychotherapeutic interventions can buffer the relational and emotional vulnerabilities associated with infertility and provide direction for culturally responsive clinical practice.

First, the improvement in family functioning across both treatment groups aligns with earlier evidence that infertility disrupts family cohesion and adaptive problem-solving (Bakhshipoor et al., 2012; Hamid et al., 2021; Zarei, 2019). By posttest and follow-up, participants in both interventions reported better problem-solving, communication, affective involvement, and behavior control. CBT helped participants identify and challenge maladaptive beliefs about infertility, which often lead to helplessness and relational disengagement (Dattilio, 2009; Reuman & Thompson-Hollands, 2025). Similar results have been found in studies where cognitive restructuring reduced emotional reactivity and improved adaptability in infertile couples (Forough Amiri, 2022; Hamid et al., 2021). Relaxation and stress management techniques taught in CBT likely contributed to participants' enhanced capacity to regulate distress and engage constructively in family roles (Nawaz et al., 2025; Vioreanu, 2023; Wang et al., 2023).

EFT, however, led to greater changes in family functioning, reflected in large effect sizes and sustained follow-up improvement. This is consistent with the attachment-based theoretical foundation of EFT, which explicitly targets emotional accessibility and responsiveness—the core of healthy relational functioning (Furrow et al., 2019; Greenman & Johnson, 2013). Prior work shows that EFT strengthens secure bonds and fosters resilience even under severe relational stressors, such as infertility (Allan et al., 2023; Marren et al., 2022; Shahabi &

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Sanagoi Maharrar, 2019). By helping participants recognize and share primary emotions like fear of rejection and grief about infertility, EFT can reorganize negative interaction cycles into patterns of support and trust (Furrow et al., 2019; Zhao et al., 2025). Cultural adaptations of EFT have proven effective among diverse populations, including Middle Eastern and marginalized groups, where shame and silence about infertility are prevalent (Allan et al., 2023; Zhao et al., 2025). The present study's results confirm the relevance of these mechanisms in an Iranian context.

The reduction in permissive attitudes toward extramarital relationships also reinforces previous findings about the relational risks of infertility and the protective impact of therapy. Infertility-related distress can increase vulnerability to alternative relationship ideation, either as an escape from perceived marital inadequacy or as a reaction to social pressure (Labrecque & Whisman, 2020; Le et al., 2024; Tajbakhsh, 2021). Both interventions significantly reduced such attitudes. CBT likely achieved this by challenging cognitive distortions about self-worth and marital failure and by promoting problem-focused coping (Dattilio, 2009; Kiai Rad et al., 2020). Previous studies have shown that when women reframe negative infertility narratives, they report less openness to infidelity and greater marital commitment (Ahramian et al., 2022; Le et al., 2024).

EFT produced a greater reduction in infidelity-related attitudes, consistent with its capacity to repair emotional disconnection and foster secure attachment (Furrow et al., 2019; Shahabi & Sanagoi Maharrar, 2019). When couples (or individuals) experience emotional responsiveness and attunement, perceived alternatives to the primary relationship become less salient (Ghaforian Mohabi et al., 2025; Marren et al., 2022). Recent process research indicates that emotional validation and safe expression of unmet needs in EFT reduce secrecy and avoidance, which are risk factors for infidelity (Greenman & Johnson, 2013; Zhao et al., 2025). Even when applied individually rather than with both partners, EFT can help participants reshape their emotional narratives about marital failure and infertility shame (Ghaforian Mohabi et al., 2025; Smith et al., 2023).

The stronger and more stable effects of EFT over CBT in this study are theoretically expected. While CBT effectively changes surface-level dysfunctional thoughts, EFT engages with deeper affective processes and attachment fears (Reuman & Thompson-Hollands, 2025; Thoma & Greenberg, 2015). Long-term marital resilience may depend more on secure emotional connection than solely on cognitive appraisal, particularly when the couple faces existential stressors such as infertility (Allan et al., 2023; Marren et al., 2022). Moreover, Iranian cultural norms emphasize emotional loyalty and family cohesion; thus, an approach that rebuilds trust and intimacy may resonate more deeply and lead to sustained change (Rezai et al., 2021; Shahabi & Sanagoi Maharrar, 2019).

Our findings also support prior work on the need for culturally sensitive adaptation of Western-developed therapies. EFT has been successfully modified to respect collectivist values while encouraging safe vulnerability (Allan et al., 2023; Zhao et al., 2025), and CBT has been tailored to infertility narratives in Iran (Forough Amiri, 2022; Hamid et al., 2021). These adaptations likely contributed to the interventions' success in a marginalized population, which often experiences stigma, economic strain, and limited mental health access (Gouveia et al., 2024; Meyer et al., 2023).

Finally, the psychometric rigor of this study strengthens confidence in its results. The Attitude Toward Infidelity Scale and Family Assessment Device used here have demonstrated strong validity and reliability in Iranian samples (Abdollahzadeh, 2010; Seyed Ali Tabr et al., 2015; Yousefi, 2012). Incorporating culturally validated measures ensures that observed changes reflect genuine psychological and relational improvement rather than measurement bias.

5. Suggestions and Limitations

Despite promising findings, several limitations should be acknowledged. The sample size was modest, with only 45 participants, which may limit statistical power and generalizability to the broader population of infertile women. Participants were drawn from a single clinic in Tehran and were primarily self-selected, which may have introduced selection bias; those willing to participate in psychotherapy might already have greater motivation for relational change. Additionally, the study relied on self-report instruments for key outcomes; although these tools are validated, they are vulnerable to social desirability and response bias, especially concerning sensitive topics like infidelity. The follow-up period was limited to two months; longer-term tracking is needed to assess the durability of therapeutic gains. Finally, although group interventions were standardized, therapist effects and variations in group dynamics may have influenced outcomes.

Future studies should include larger, more diverse samples across multiple clinical settings to increase external validity and explore whether the findings hold for different

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cultural subgroups or socioeconomic backgrounds. Incorporating longer follow-up intervals, such as six months or one year, would clarify the sustainability of the observed changes, particularly regarding prevention of extramarital involvement. Further comparative trials could examine hybrid models that integrate EFT's emotional depth with CBT's cognitive restructuring to determine whether combining these elements yields superior outcomes. Including partners or delivering conjoint therapy would allow investigation of systemic family-level change rather than individual perceptions alone. Additionally, employing multimethod assessment—such as observational coding of couple interaction or biological markers of stress—could complement self-report data and reduce bias.

Clinicians working with infertile and marginalized women should consider prioritizing interventions that target both emotional attachment injuries and cognitive distortions. Emotion-Focused Therapy appears particularly valuable for rebuilding trust, deepening intimacy, and reducing vulnerability to extramarital temptations, while CBT provides essential tools for stress management and maladaptive thought correction. Mental health programs in fertility clinics and community centers could integrate these approaches into accessible group formats, culturally adapted to local norms. Psychoeducation about the relational impact of infertility and training in emotional communication may empower women to cope adaptively and strengthen marital resilience. Additionally, creating supportive outreach for marginalized populations can reduce stigma and encourage participation in psychological services, fostering healthier family functioning and relationship stability.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

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

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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