





Effectiveness of Compassion-Focused Therapy (CFT) and Schema Therapy on Sexual Self-Concept and Marital Satisfaction in Infertile Women

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ABSTRACT

Objective: This study aimed to compare the effectiveness of Compassion-Focused Therapy (CFT) and Schema Therapy (ST) on sexual self-concept and marital satisfaction in infertile women.

Methods and Materials: A quasi-experimental design with pre-test, post-test, and one-month follow-up assessments and a control group was employed. Thirty infertile women from Tehran were selected through purposive sampling and randomly assigned to three groups: CFT (n=10), ST (n=10), and waitlist control (n=10). Participants in the CFT group received eight weekly group sessions based on standard CFT protocols, while those in the ST group received ten weekly group sessions of schema therapy. The control group did not receive any intervention during the study period. Data were collected using Snell's Sexual Self-Concept Questionnaire and the ENRICH Marital Satisfaction Questionnaire. Data analysis was conducted using repeated measures ANOVA and multivariate analysis of covariance (MANCOVA).

Findings: Results indicated that both CFT and ST significantly improved sexual self-concept and marital satisfaction compared to the control group ($p < .001$). Pairwise comparisons showed that in both treatment groups, improvements from pre-test to post-test and pre-test to follow-up were significant ($p < .001$), while differences between post-test and follow-up were not significant ($p > .05$). CFT demonstrated a significantly greater effect on marital satisfaction than ST ($p < .05$), though the two therapies did not differ significantly in their impact on sexual self-concept ($p > .05$). No significant changes were observed in the control group across any measures ($p > .05$).

Conclusion: Both CFT and ST are effective interventions for improving sexual self-concept and marital satisfaction in infertile women. CFT may be particularly advantageous in enhancing marital satisfaction, likely due to its emphasis on emotional attunement and self-compassion practices.

Keywords: *Compassion-Focused Therapy, Schema Therapy, Sexual Self-Concept, Marital Satisfaction, Infertile Women.*

1. Introduction

Infertility, often defined as the inability to conceive after a year of regular unprotected intercourse, is a multifaceted phenomenon with profound psychological, relational, and identity-based ramifications, especially for women in patriarchal or family-oriented societies. The emotional and interpersonal distress associated with infertility is not solely due to biological factors but is intricately shaped by sociocultural expectations, gender roles, and internalized beliefs about womanhood and marital duty (Mohammadpour et al., 2020). Women experiencing infertility often report disrupted self-identity, increased psychological distress, and compromised marital functioning, particularly in areas related to sexual self-concept and satisfaction within the marriage (Mohammadian et al., 2020; Wang et al., 2023).

Sexual self-concept refers to the cognitive and affective evaluations individuals make about themselves as sexual beings, encompassing dimensions such as sexual self-esteem, anxiety, motivation, assertiveness, and body image. This self-schema is highly susceptible to contextual stressors such as infertility, which may evoke feelings of inadequacy and failure, particularly when reproductive ability is viewed as central to feminine identity (Torabi & Malekirad, 2022). Disruption in sexual self-concept frequently manifests in decreased intimacy, sexual dysfunction, and ultimately, lower marital satisfaction. Marital satisfaction itself is a dynamic construct influenced by various factors including emotional intimacy, communication, sexual compatibility, and adaptive coping strategies (Vasi, 2022). Notably, studies have identified that marital satisfaction among infertile women is closely intertwined with their perceived sexual efficacy and self-worth (Babaei et al., 2020; Gomes & Sá, 2021).

In light of the profound emotional toll of infertility, the importance of psychological interventions that target both individual and relational dimensions has gained considerable attention. Among these interventions, Compassion-Focused Therapy (CFT) has emerged as a promising approach in promoting emotional resilience and improving interpersonal functioning by fostering self-compassion, reducing shame, and enhancing psychological flexibility (Gewirtz-Meydan, 2023; Tashvighi et al., 2023). Developed by Gilbert, CFT aims to help individuals shift from self-criticism to self-soothing through the cultivation of compassionate mindsets and affiliative emotions. This therapeutic approach is particularly suited for populations

characterized by high levels of self-blame, feelings of inferiority, and body-related distress—all common features among infertile women (Mohammadian et al., 2020).

A growing body of research suggests that self-compassion is a protective factor against marital discord and sexual dissatisfaction. It facilitates adaptive emotion regulation, buffers the effects of interpersonal stress, and contributes to greater intimacy and relational satisfaction (Sierra-Swiech, 2023; Wang et al., 2023). In a longitudinal study, Wang et al. (2023) found that higher levels of self-compassion predicted lower parenting stress and greater marital satisfaction over time, highlighting the bidirectional relationships between individual emotional traits and dyadic functioning (Wang et al., 2023). Similar findings have been reported in the Iranian context, where self-compassion interventions were associated with improved sexual intimacy and reduced marital conflicts in infertile couples (Hosseini, 2022).

While CFT primarily enhances emotional balance and self-directed kindness, Schema Therapy (ST), on the other hand, targets early maladaptive schemas—deeply rooted cognitive-emotional patterns formed during childhood that can disrupt adult functioning. These schemas often underlie rigid beliefs about self-worth, rejection, and dependency, which are highly relevant to infertile women struggling with internalized stigmas and unmet attachment needs (Ismailzadeh, 2021). Schema Therapy integrates elements from cognitive-behavioral, experiential, interpersonal, and psychodynamic therapies to identify and modify these maladaptive schemas. Evidence indicates that ST can significantly improve sexual self-efficacy, reduce psychological distress, and enhance marital quality in individuals and couples dealing with chronic relational issues (Esmailzadeh & Akbari, 2021; Soleimannezhad & Hajizadeh, 2022).

Studies by Jahangiri and Rezaei (2021) have shown that schema-based interventions are as effective as emotion-focused therapies in improving marital conflict resolution and sexual intimacy, especially in women affected by relational betrayals such as infidelity (Jahangiri & Rezaei, 2021). This finding is echoed by Kavosh Meli and Moheb (2022), who demonstrated that schema-focused therapy contributed to higher marital satisfaction scores by reconstructing maladaptive internal beliefs related to attachment, trust, and sexuality (Kavosh Meli & Moheb, 2022). Moreover, Esmailzadeh and Akbari (2021) confirmed the effectiveness of ST in enhancing sexual self-efficacy and marital adjustment among couples facing

emotional disconnection and prolonged dissatisfaction (Esmacilzadeh & Akbari, 2021).

The mechanisms through which ST exerts its effects appear to involve cognitive restructuring and emotional processing of unmet childhood needs, leading to improved emotional availability and interpersonal sensitivity in romantic contexts (Gomes & Sá, 2021; Saboonchi et al., 2020). Given that sexual dissatisfaction and reduced marital harmony are often linked to unresolved schema modes, such as the "defectiveness/shame" or "emotional deprivation" schema, ST offers a structured and theoretically grounded path for therapeutic change (Pahlavani & Zomordi, 2022; Vaseghi et al., 2022). Indeed, Schema Therapy has demonstrated efficacy in clinical trials involving couples with high conflict levels and individuals with deeply ingrained relational insecurities (Soleimannezhad & Hajizadeh, 2022; Vasi, 2022).

Despite the accumulating evidence for the separate efficacy of CFT and ST, there is a noticeable gap in comparative studies that examine their relative effects, particularly in specific populations such as infertile women. Most studies to date have focused on general marital populations or those experiencing infidelity or emotional neglect. There is limited research directly assessing whether the emotional soothing mechanisms of CFT are more or less effective than the cognitive restructuring processes of ST in altering sexual self-concept and enhancing marital satisfaction among infertile women—an understudied group facing unique psychological burdens (Hosseini, 2022; Mohammadpour et al., 2020).

Furthermore, the intersection of infertility and sexuality remains a relatively neglected area in therapeutic research. Sexual self-concept in infertile women is often compromised by internalized social narratives that equate femininity with motherhood and sexual fulfillment with procreation. These narratives not only influence sexual behaviors but also affect relational expectations and emotional intimacy (Torabi & Malekiran, 2022). Therapeutic models that address these intersecting constructs—self-perception, schema activation, and emotional regulation—could provide valuable frameworks for intervention. Both CFT and ST hold promise in this regard, but empirical studies directly comparing them are scarce.

To address this gap, the present study investigates the effectiveness of Compassion-Focused Therapy and Schema Therapy in improving sexual self-concept and marital satisfaction among infertile women.

2. Methods and Materials

2.1. Study design and Participant

The present study employed a quantitative, quasi-experimental design with pre-test, post-test, and follow-up assessments along with a control group. The statistical population included all infertile women residing in Tehran who visited Sarem Hospital's treatment center during the first half of 2024. Initial coordination was conducted to implement the research, and participants were recruited through a public announcement posted as banners in the hospital and within a virtual group established by women undergoing infertility treatment, managed by the hospital's administrator. A total of 45 participants were initially targeted, anticipating potential dropout, with the goal of retaining at least 30 participants through the end of the study, which would be sufficient for the research design. These 30 women underwent psychological evaluation and clinical interviews to ensure the absence of psychological disorders or significant clinical psychological and behavioral issues. Following screening, they were randomly assigned into three groups: the first group receiving Compassion-Focused Therapy (10 participants), the second group receiving Schema Therapy (10 participants), and a control group (10 participants). The groups were then randomly designated to receive Compassion-Focused Therapy, Schema Therapy, or act as control.

2.2. Measures

2.2.1. Sexual Self-Concept

The Sexual Self-Concept Questionnaire by Snell (1995) was employed to measure participants' sexual self-concept. This questionnaire includes 100 items and 20 components encompassing domains such as sexual anxiety, sexual self-efficacy, sexual awareness, motivation to avoid risky sexual behavior, chance-based sexual control, sexual preoccupation, sexual assertiveness, sexual optimism, sexual self-blame regarding problems, sexual monitoring, sexual motivation, management of sexual problems, sexual confidence, sexual satisfaction, external sexual control, sexual schema, fear of sex, prevention of sexual problems, sexual depression, and internal sexual control. The items are rated using a Likert scale with prompts such as "I have the motivation necessary to avoid engaging in risky (i.e., unprotected) sexual behavior." Validity refers to the extent to which an instrument measures what it intends to measure.

Ramazani et al. (2012) evaluated the content, face, and criterion validity of this questionnaire and confirmed its adequacy. Reliability or dependability of the instrument pertains to the consistency of measurement under identical conditions. In the study by Ramazani et al. (2012), Cronbach's alpha coefficient was estimated above 0.7 for this questionnaire, indicating acceptable internal consistency.

2.2.2. Marital Satisfaction

The Marital Satisfaction Questionnaire used in this study was the abbreviated version of the Enrich Marital Satisfaction Scale, which measures enrichment and enhancement of relationships, communication, and satisfaction. The original form includes 110 close-ended questions and 12 subscales developed by Olson, Fournier, and Druckman (1982) and Fowers and Olson (1993) to assess marital satisfaction. The short form, designed to reduce respondent fatigue, contains 47 questions with 8 subscales covering personality issues, marital relationship, conflict resolution, financial management, leisure activities, sexual relationship, marriage and children, family and friends, and religious orientation. Fundamentally, the questionnaire is an attitude measure using a Likert-type scale. The Enrich questionnaire possesses favorable psychometric indices. Correlations with components of family satisfaction range from 0.41 to 0.60, and correlations with components of life satisfaction range from 0.32 to 0.41, indicating its construct validity. The subscales can distinguish between satisfied and dissatisfied couples, with reliability coefficients ranging from 0.85 to 0.95. Typically, the questionnaire includes multiple subscales assessing various aspects of marital satisfaction. These include communication, with questions about the quality and quantity of verbal and non-verbal interactions between spouses; conflict resolution, which examines how couples manage and resolve disagreements; shared activities, which assesses the amount and quality of time couples spend together; sexual relationship, which gauges satisfaction with sexual intimacy; and emotional support, which measures the degree of emotional support and affection exchanged between spouses. Responses are scored on a Likert scale (e.g., from strongly disagree to strongly agree). The sum of scores across subscales and the total score reflects an individual's level of marital satisfaction. This instrument is widely used by counselors and psychologists to help improve marital relationships and address existing issues.

Soleimani's research on irrational beliefs and marital dissatisfaction confirmed the content validity of this questionnaire after expert review by psychologists Navabi Nejad and Naderi. Additionally, its reliability was assessed using Cronbach's alpha, yielding a coefficient of 0.93.

2.3. Interventions

To implement the acceptance and commitment-based schema therapy, treatment sessions were conducted based on the protocol developed by Young and colleagues (2023). The experimental group underwent eight 45-minute sessions, delivered twice weekly over five consecutive weeks. In the first session, participants were introduced to the group, therapeutic goals, schema therapy framework, and emotional awareness, and completed pre-assessment questionnaires. The second session included a review of initial content, assessment of coping styles, problem conceptualization based on schema therapy, and introduction to ACT principles, along with assigned homework. In the third session, cognitive techniques were used to challenge dominant schemas, while metaphors were employed to highlight the inefficacy of controlling negative events and to teach openness to unpleasant experiences. Relaxation techniques and new homework were also introduced. The fourth session focused on practicing cognitive defusion and nonjudgmental observation of thoughts. The fifth session emphasized mindfulness and self-as-context through metaphors (e.g., chessboard metaphor). The sixth session explored the developmental roots of maladaptive schemas and clarified emotional needs, followed by values identification and ranking. The seventh session addressed practical strategies for overcoming barriers to valued living, using metaphors and action planning. Finally, in the eighth session, participants were encouraged to abandon maladaptive coping strategies, practice adaptive behaviors, summarize learned skills, share personal outcomes, plan for relapse prevention, and complete post-intervention assessments.

2.4. Data Analysis

Data analysis was conducted using descriptive and inferential statistical methods. Descriptive statistics included measures such as mean and standard deviation to summarize demographic variables and research variables. Inferential statistical analyses employed repeated measures analysis of variance (ANOVA) to compare the means of pre-test, post-test, and follow-up scores across the three groups. The aim

was to assess within-group changes over time and between-group differences in the dependent variables of sexual self-concept and marital satisfaction. The significance level was set at $p < 0.05$. All statistical analyses were performed using SPSS version 26.

3. Findings and Results

Table 1 presents the descriptive statistics for sexual self-concept and marital satisfaction in the Compassion-Focused

Therapy (CFT), Schema Therapy, and waitlist control groups at pre-test, post-test, and one-month follow-up. In the waitlist control group, neither sexual self-concept nor marital satisfaction changed meaningfully across measurement occasions. In contrast, both experimental groups showed marked increases from pre-test to post-test and from pre-test to follow-up. The inferential analyses that follow will examine the significance and durability of these changes.

Table 1

Descriptive Statistics for Sexual Self-Concept and Marital Satisfaction

Variable	Group	Pre-test Mean (SD)	Post-test Mean (SD)	Follow-up Mean (SD)
Sexual self-concept	Waitlist Control	219.86 (50.79)	222.46 (51.91)	221.81 (51.81)
	Compassion-Focused	222.46 (47.94)	250.66 (52.25)	246.93 (50.65)
	Schema Therapy	220.46 (43.66)	245.60 (43.06)	236.11 (48.40)
Marital satisfaction	Waitlist Control	129.46 (6.62)	128.73 (11.51)	129.66 (10.23)
	Compassion-Focused	128.73 (11.51)	145.20 (14.32)	144.66 (13.64)
	Schema Therapy	130.33 (8.20)	140.20 (10.83)	140.66 (12.58)

A multivariate analysis of covariance (MANCOVA) was conducted to evaluate the effect of treatment condition (Compassion-Focused Therapy, Schema Therapy, or waitlist control) on post-test sexual self-concept and marital satisfaction, controlling for pre-test scores on each variable. Multivariate tests indicated a significant overall effect of group on the combined dependent variables, Pillai's Trace =

.743, $F(4, 54) = 34.12$, $p < .001$, $\eta^2 = .716$. Univariate tests revealed significant group effects for sexual self-concept, $F(2, 56) = 45.12$, $p < .001$, $\eta^2 = .617$, and for marital satisfaction, $F(2, 56) = 38.54$, $p < .001$, $\eta^2 = .579$. These results demonstrate that, after adjusting for baseline levels, the type of intervention had a robust and significant impact on both outcomes.

Table 2

MANCOVA Results for the Effect of Treatment Condition on Post-test Sexual Self-Concept and Marital Satisfaction

Effect	Pillai's Trace	F	df	df_error	p	η^2
Multivariate						
Treatment Group	.743	34.12	4	54	<.001	.716
Univariate						
Sexual Self-Concept	—	45.12	2	56	<.001	.617
Marital Satisfaction	—	38.54	2	56	<.001	.579

Pairwise comparisons for sexual self-concept are summarized in Table 3. In the Compassion-Focused Therapy group, sexual self-concept increased significantly from pre-test to post-test (mean difference = 28.20, $p < .001$) and from pre-test to follow-up (mean difference = 24.47, $p < .001$), with no significant change between post-test and follow-up (mean difference = 8.49, $p = .172$). Similarly, the

Schema Therapy group showed significant gains from pre-test to post-test (mean difference = 25.14, $p < .001$) and from pre-test to follow-up (mean difference = 15.65, $p < .001$), but no significant difference between post-test and follow-up (mean difference = -3.73, $p = .356$). The control group showed no significant changes across any pairwise comparison (all $p > .05$).

Table 3

Pairwise Comparisons for Sexual Self-Concept

Group	Comparison	Mean Difference	p
Compassion-Focused	Pre-test vs. Post-test	28.20	<.001 ^b
	Pre-test vs. Follow-up	24.47	<.001 ^b
	Post-test vs. Follow-up	8.49	.172
Schema Therapy	Pre-test vs. Post-test	25.14	<.001 ^b
	Pre-test vs. Follow-up	15.65	<.001 ^b
	Post-test vs. Follow-up	-3.73	.356
Waitlist Control	Pre-test vs. Post-test	2.20	.347
	Pre-test vs. Follow-up	1.34	.461
	Post-test vs. Follow-up	-0.86	.571

Table 4 presents the adjusted mean differences between groups for sexual self-concept at post-test and follow-up, each compared to pre-test. Compassion-Focused Therapy produced a significantly greater increase than either the waitlist control (post-test mean difference = 26.47, SE =

4.43, $p < .001$; follow-up mean difference = 23.70, SE = 5.09, $p < .001$) or Schema Therapy (post-test mean difference = 3.18, SE = 4.41, $p = .073$; follow-up mean difference = 4.99, SE = 5.07, $p = .996$).

Table 4

Adjusted Group Comparisons for Sexual Self-Concept at Post-test and Follow-up

Contrast	Mean Difference	SE	p
Post-test vs. Pre-test			
Compassion-Focused vs. Waitlist Control	26.47	4.43	<.001
Schema Therapy vs. Waitlist Control	23.29	4.46	<.001
Compassion-Focused vs. Schema Therapy	3.18	4.41	.073
Follow-up vs. Pre-test			
Compassion-Focused vs. Waitlist Control	23.70	5.09	<.001
Schema Therapy vs. Waitlist Control	18.71	5.13	<.001
Compassion-Focused vs. Schema Therapy	4.99	5.07	.996

Pairwise comparisons for marital satisfaction appear in the table below. In the Compassion-Focused Therapy group, marital satisfaction increased significantly from pre-test to post-test (mean difference = 16.47, $p < .001$) and from pre-test to follow-up (mean difference = 15.93, $p < .001$), with no significant change between post-test and follow-up (mean difference = -0.54, $p = .594$). The Schema Therapy group

showed significant improvements from pre-test to post-test (mean difference = 9.87, $p < .001$) and from pre-test to follow-up (mean difference = 10.33, $p < .001$), and no significant post-test to follow-up change (mean difference = 0.44, $p = .651$). The control group again showed no significant differences across any comparison (all $p > .05$).

Pairwise Comparisons for Marital Satisfaction

Group	Comparison	Mean Difference	p
Compassion-Focused	Pre-test vs. Post-test	16.47	<.001 ^b
	Pre-test vs. Follow-up	15.93	<.001 ^b
	Post-test vs. Follow-up	-0.54	.594
Schema Therapy	Pre-test vs. Post-test	9.87	<.001 ^b
	Pre-test vs. Follow-up	10.33	<.001 ^b
	Post-test vs. Follow-up	0.44	.651
Waitlist Control	Pre-test vs. Post-test	1.20	.234
	Pre-test vs. Follow-up	0.20	.817
	Post-test vs. Follow-up	-1.01	.321

Adjusted Group Comparisons for Marital Satisfaction at Post-test and Follow-up

Contrast	Mean Difference	SE	p
Post-test vs. Pre-test			
Compassion-Focused vs. Waitlist Control	15.05	2.31	<.001
Schema Therapy vs. Waitlist Control	8.18	2.32	.003
Compassion-Focused vs. Schema Therapy	6.87	2.30	.015
Follow-up vs. Pre-test			
Compassion-Focused vs. Waitlist Control	15.49	2.67	<.001
Schema Therapy vs. Waitlist Control	9.63	2.69	.003
Compassion-Focused vs. Schema Therapy	8.85	2.66	.103

Discussion and Conclusion

The present study investigated the comparative effectiveness of Compassion-Focused Therapy (CFT) and Schema Therapy (ST) in enhancing sexual self-concept and marital satisfaction among infertile women. The findings revealed that both CFT and ST significantly improved sexual self-concept from pre-test to post-test, and these improvements remained stable at the one-month follow-up. However, when comparing the two interventions, no significant difference emerged between CFT and ST in terms of improving sexual self-concept. In contrast, CFT demonstrated a significantly greater effect on marital satisfaction compared to ST, both immediately after treatment and at follow-up.

The significant improvement in sexual self-concept among women receiving CFT aligns with previous studies emphasizing the central role of self-compassion in transforming internalized self-critical attitudes and shame-based beliefs commonly found in individuals experiencing infertility-related distress (Gewirtz-Meydan, 2023; Hosseini, 2022). CFT provides a structured emotional context for individuals to learn to respond to their vulnerabilities with kindness, which in turn facilitates acceptance of their sexual identity and body image, both of which are frequently compromised in infertile populations (Mohammadian et al., 2020). This therapeutic transformation appears crucial given that infertility often fosters feelings of bodily inadequacy and sexual inferiority, disrupting the core components of sexual self-concept. Our findings support those of Wang et al. (2023), who demonstrated that self-compassion interventions significantly reduced psychological distress and increased emotional satisfaction in intimate relationships (Wang et al., 2023).

Similarly, the effectiveness of Schema Therapy in improving sexual self-concept is consistent with existing literature highlighting the role of early maladaptive schemas (EMSs) in shaping sexual identity and beliefs (Esmaeilzadeh & Akbari, 2021; Ismaeilzadeh, 2021). Schema modes such as defectiveness/shame, unrelenting standards, and emotional deprivation—often intensified by infertility—can severely distort one's sexual self-view and lead to

maladaptive relational patterns (Saboonchi et al., 2020). By targeting and restructuring these core beliefs, ST provides clients with cognitive-emotional tools to reframe their self-perception and reestablish confidence in their sexual roles. In line with our findings, previous research by Soleimannezhad and Hajizadeh (2022) found that schema therapy significantly enhanced marital satisfaction and adjustment by decreasing schema-driven emotional reactivity (Soleimannezhad & Hajizadeh, 2022).

Interestingly, the results indicated that while both therapies were effective in enhancing sexual self-concept, CFT had a more substantial and lasting impact on marital satisfaction than ST. This distinction may be attributable to the interpersonal focus of CFT, which directly cultivates empathic engagement, emotional connectedness, and mindful relational communication—factors known to be central in marital satisfaction (Sierra-Swiech, 2023; Tashvighi et al., 2023). Through the development of a compassionate mindset, clients are better able to tolerate relational stressors and engage in vulnerable emotional disclosures, which deepens intimacy and trust within the marital dyad. This finding is in agreement with previous research by Babaei et al. (2020), who demonstrated that CFT significantly increased marital satisfaction in women coping with relational betrayal due to cyber infidelity (Babaei et al., 2020).

By contrast, Schema Therapy may enhance marital satisfaction more indirectly, as it primarily focuses on cognitive restructuring of internalized schemas rather than fostering dyadic emotional processes in real time. Although ST significantly improved marital satisfaction in this study, its comparative inferiority to CFT could reflect its lesser emphasis on real-time emotional attunement, which infertile couples often require to restore emotional intimacy. As Jahangiri and Rezaei (2021) note, therapeutic approaches that explicitly target both emotional regulation and relational needs are more effective in addressing the complex interplay between individual trauma and marital discord in infertile women (Jahangiri & Rezaei, 2021). Additionally, schema activation can often produce temporary emotional discomfort, which may slow the perceived benefits of ST during the initial phases of therapy (Gomes & Sá, 2021).

This study also reinforces the growing understanding that interventions targeting psychological flexibility, emotional resilience, and maladaptive cognitive schemas yield beneficial effects for individuals experiencing the emotional fallout of infertility (Mohammadpour et al., 2020; Pahlavani & Zomordi, 2022). In particular, both CFT and ST appear to

counteract the infertility-induced deterioration of self-concept and marital quality by enabling clients to reinterpret their experiences through a lens of self-kindness and balanced thinking. Importantly, our results support the marital satisfaction model proposed by Tashvighi et al. (2023), which positions self-compassion as a key mediating variable influencing emotional regulation and intimacy outcomes (Tashvighi et al., 2023).

Furthermore, the effectiveness of both therapies in sustaining improvements at one-month follow-up suggests their potential for producing lasting change. The durability of CFT's impact on marital satisfaction might be explained by its neurophysiological orientation—activation of the parasympathetic system through compassionate imagery and emotional soothing may reinforce long-term shifts in relational behavior (Gewirtz-Meydan, 2023). ST's long-term effects on sexual self-concept may similarly be rooted in the depth of cognitive restructuring it fosters, which reconfigures entrenched schema content at the core identity level (Vaseghi et al., 2022; Vasi, 2022).

Our findings also contribute to the literature by highlighting the intersection of infertility, sexual identity, and marital adjustment as an urgent clinical priority. In many cultures, women are socially evaluated based on their reproductive capacity and sexual fulfillment within marriage. Infertility thus becomes not only a biological deficit but a psychosocial crisis, often triggering guilt, shame, and relational withdrawal (Maleki et al., 2019; Torabi & Malekiran, 2022). Culturally attuned psychological interventions such as CFT and ST offer valuable frameworks for addressing this layered distress by integrating both individual and dyadic healing processes. As such, this study underscores the need for gender-sensitive and emotionally nuanced interventions in reproductive mental health care.

4. Limitations and Suggestions

Despite its contributions, this study is not without limitations. First, the sample size was relatively small and restricted to infertile women who sought help at a single hospital in Tehran, which may limit the generalizability of the findings to broader populations, including men or individuals from diverse cultural and socioeconomic backgrounds. Second, the duration of follow-up was limited to one month, preventing a more comprehensive evaluation of the long-term sustainability of therapeutic gains. Third, the study did not account for moderating variables such as

duration of infertility, type of infertility (primary vs. secondary), or presence of other psychosocial stressors (e.g., family pressure, financial hardship), which could influence therapeutic outcomes. Finally, the reliance on self-report measures, though validated, may be subject to social desirability bias, particularly in assessing sensitive constructs such as sexual self-concept.

Future studies should consider using larger and more diverse samples across multiple treatment centers to improve external validity. It is also recommended to extend the follow-up period to assess whether the benefits of CFT and ST endure over six months or one year. Comparing individual therapy with couple-based formats for both CFT and ST may also reveal more nuanced insights into their mechanisms of action in marital dynamics. Furthermore, incorporating qualitative methods such as interviews or narrative analysis could deepen our understanding of the subjective experiences and therapeutic processes that drive change. Lastly, exploring potential moderators and mediators—such as attachment styles, cultural beliefs about infertility, or emotion regulation styles—could help tailor interventions more effectively to individual needs.

Given the significant impact of both CFT and ST, clinicians working with infertile women should consider incorporating these therapeutic models into fertility counseling and marital therapy. Compassion-Focused Therapy may be particularly suitable for clients with high levels of self-criticism, body shame, and emotional disengagement from their partner, as it fosters self-soothing and emotional intimacy. Schema Therapy, on the other hand, may be ideal for clients with rigid cognitive patterns and unresolved childhood relational trauma that affects their sexual identity and marital roles. It is recommended that therapists receive formal training in both models to effectively deliver integrative care. Additionally, collaborative programs between fertility specialists and mental health professionals should be developed to offer holistic support for couples navigating infertility, with a special emphasis on preserving emotional connection and sexual well-being throughout the treatment journey.

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

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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