




Comparison of the Effectiveness of Intensive Short-Term Dynamic Psychotherapy and Schema Therapy on Cognitive Emotion Regulation and Experiential Avoidance in Female Patients with Generalized Anxiety Disorder

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ABSTRACT

The aim of the present study was to compare the effectiveness of Intensive Short-Term Dynamic Psychotherapy (ISTDP) and Schema Therapy on cognitive emotion regulation and experiential avoidance in female patients diagnosed with Generalized Anxiety Disorder. Based on its objective, this study is applied in nature, and in terms of data collection, it was conducted cross-sectionally using a quasi-experimental design with a pretest–posttest control group and a three-month follow-up assessment. The statistical population consisted of women aged 20–45 with Generalized Anxiety Disorder who referred to counseling and psychological services centers in Tehran between June 2024 and October 2024. Data were collected using the Cognitive Emotion Regulation Questionnaire (CERQ-P) and the Acceptance and Action Questionnaire–II (AAQ-II), administered during the pretest, posttest, and follow-up phases to the sample group. Descriptive statistics (mean, standard deviation) and inferential statistics (mixed repeated-measures analysis) were used for data analysis. The findings indicated significant differences between the experimental and control groups in both treatment methods, and these differences remained stable at follow-up ($p < .05$). However, when comparing the effectiveness of the two therapeutic approaches, the results showed that Intensive Short-Term Dynamic Psychotherapy was more effective than Schema Therapy. Overall, the results suggest that both Intensive Short-Term Dynamic Psychotherapy and Schema Therapy can help reduce cognitive problems in individuals with Generalized Anxiety Disorder, and it may even be argued that ISTDP is more effective in reducing these cognitive difficulties. Given that one of the inclusion criteria in this study was the absence of pharmacotherapy, it is recommended that future studies combine medication with these two treatments to obtain more comprehensive results.

Keywords: *Intensive Short-Term Dynamic Psychotherapy; Schema Therapy; Cognitive Emotion Regulation; Experiential Avoidance; Generalized Anxiety Disorder*

1. Introduction

Generalized Anxiety Disorder (GAD) is one of the most pervasive and debilitating anxiety disorders, characterized by excessive worry, persistent tension, and chronic difficulty regulating emotional and cognitive responses to stress. Research over the past two decades has highlighted that individuals with GAD experience significant impairments in emotion regulation, leading to heightened vulnerability to chronic anxiety, avoidance tendencies, and maladaptive coping patterns (Saviola et al., 2020). Emotion regulation difficulties—particularly the use of maladaptive cognitive strategies such as catastrophizing, self-blame, and rumination—play a central role in the onset and exacerbation of anxiety symptoms (Garnefski & Kraaij, 2006; Zsido et al., 2021). These cognitive patterns interact dynamically with neurobiological and interpersonal variables, often resulting in persistent anxiety states that are resistant to superficial or symptomatic interventions (Fosha et al., 2022). For this reason, identifying and implementing therapeutic approaches that explicitly target cognitive and emotional regulation systems is a critical priority in the treatment of GAD.

A growing body of evidence demonstrates that maladaptive schemas, experiential avoidance, and emotional processing deficits are key mechanisms underlying chronic anxiety in clinical populations (Cookson et al., 2020; Pilkington et al., 2024). Early maladaptive schemas—enduring cognitive-emotional patterns formed during childhood—shape how individuals interpret threats, evaluate themselves, and cope with distress (Joshua et al., 2025). Individuals with GAD often possess rigid schemas related to vulnerability, incompetence, or mistrust, which trigger excessive worry and reinforce maladaptive avoidance behaviors (Rahmani et al., 2024). These schemas activate habitual cognitive strategies that maintain chronic anxiety by preventing emotional integration and adaptive meaning-making processes (Mares et al., 2024). The persistence of these schemas across contexts suggests that therapeutic models capable of modifying deeper cognitive structures may offer advantages over purely symptom-focused approaches.

Cognitive emotion regulation, a core mechanism in anxiety pathology, has received considerable empirical attention. Studies consistently demonstrate that deficits in emotion regulation contribute to heightened anxiety symptoms and interfere with psychological flexibility (Armstrong & Tume, 2022; Fallahi & Narimani, 2021). As

Garnefski's model illustrates, the use of maladaptive cognitive strategies is strongly associated with anxiety severity, depression, and increased vulnerability to stress (Garnefski & Kraaij, 2006). Conversely, adaptive strategies such as positive reappraisal and refocusing on planning are linked to improved psychological functioning and reduced anxiety reactivity (Lee et al., 2019). The Iranian literature also supports these findings, showing that emotion regulation strategies are significant predictors of anxiety disorders and play an essential role in both the maintenance and treatment of emotional dysfunction (Besharat, 2016; Jafari & Joharifard, 2014; Jafarpour et al., 2017). Moreover, recent studies on behavioral and couple-based interventions further support the importance of altering cognitive strategies to improve overall functioning in anxious populations (Fredman et al., 2011; Salehi et al., 2021).

In parallel with advances in cognitive emotion regulation research, experiential avoidance has emerged as another fundamental mechanism contributing to anxiety pathology. Experiential avoidance refers to rigid attempts to escape internal experiences such as thoughts, emotions, or bodily sensations, and its relationship with anxiety disorders is well-established (Hayes et al., 2004). High levels of experiential avoidance are consistently associated with greater anxiety severity, increased worry, and poorer treatment outcomes (Cookson et al., 2020). Particularly in GAD, experiential avoidance functions as a reinforcing loop: attempts to avoid emotional experience intensify cognitive preoccupation, which in turn elevates anxiety. In Iranian populations, similar patterns have been observed, reinforcing the conceptualization of avoidance as a core process in emotional disorders (Changi Ashtiani et al., 2024; Kelidari et al., 2024). Treatments that directly reduce avoidance and teach individuals to tolerate emotional states have therefore become central to modern psychotherapy approaches for anxiety.

Given these theoretical and empirical insights, novel treatment models have emerged that aim to address deep emotional processing deficits rather than solely modifying surface-level cognitions. One of the most influential approaches in this domain is Intensive Short-Term Dynamic Psychotherapy (ISTDP). Rooted in psychodynamic theory, ISTDP focuses on resolving unconscious emotional conflicts, reducing maladaptive defenses, and facilitating corrective emotional experiences through intensive affective work (Abbass et al., 2008). Numerous studies have demonstrated its effectiveness for a range of mental health disorders, including personality disorders, somatic symptom

disorders, depression, and various anxiety conditions (Khodarahmi, 2023; Mehboodi et al., 2022). Importantly, ISTDP has shown promising results specifically for GAD, improving both emotional regulation and interpersonal functioning (Lilliengren et al., 2017). Additional Iranian research indicates that ISTDP can effectively reduce emotional dysregulation, improve attachment functioning, and enhance psychological resilience in distressed populations (Aboulpour et al., 2014; Mami et al., 2020). These findings support the notion that directly processing core affective states can disrupt entrenched patterns of avoidance and maladaptive emotion regulation.

Similarly, Schema Therapy has gained recognition as a robust intervention for chronic anxiety conditions. Schema Therapy integrates cognitive-behavioral, attachment-based, and experiential techniques to modify maladaptive schemas and strengthen adaptive modes of functioning (Joshua et al., 2025). Its utility extends to diverse clinical populations, including those with personality disorders, eating disorders, and treatment-resistant emotional disorders (Mares et al., 2024). Recent clinical work demonstrates that Schema Therapy improves emotion regulation capacity, reduces anxiety symptoms, and enhances cognitive flexibility, particularly among individuals with longstanding schemas rooted in early relational trauma (Straarup et al., 2022). Emerging research in Iran supports these findings, showing that Schema Therapy can reduce emotional distress, experiential avoidance, and maladaptive cognitive patterns in various clinical groups (Ghanavati et al., 2024; Rahmani et al., 2024; Razzaghi et al., 2025). Given that GAD involves chronic patterns of cognitive worry and emotional misinterpretation, Schema Therapy's schema-modification focus may offer significant therapeutic benefit.

The comparative investigation of ISTDP and Schema Therapy is especially relevant because both models address the interplay between emotion regulation deficits and avoidance mechanisms, albeit through distinct pathways. While Schema Therapy targets cognitive structures and meaning-making systems, ISTDP focuses on emotional processing pathways and defensive barriers. Recent literature suggests that combining or comparing models that address different layers of emotional dysfunction can deepen the understanding of treatment mechanisms in anxiety disorders (Archer et al., 2025; Rahmani et al., 2024). Furthermore, studies examining treatment effects on experiential avoidance show that interventions incorporating acceptance-based or emotion-focused components tend to produce deeper and more sustainable improvements

(Cookson et al., 2020; Sofi et al., 2013). Thus, a direct comparison of ISTDP and Schema Therapy may clarify their differential effects on cognitive emotion regulation and experiential avoidance among women with GAD.

A further motivation for this research comes from observed gender differences in emotional processing. Evidence indicates that women experience higher levels of emotional reactivity, maladaptive emotion regulation strategies, and internalizing symptoms compared to men (Saviola et al., 2020). Additionally, women are more likely to suffer from chronic patterns of worry, rumination, and interpersonal stress, making them especially vulnerable to disorders such as GAD. Given that both ISTDP and Schema Therapy aim to modify deep emotional and cognitive patterns, exploring their effectiveness within a female clinical population contributes valuable insight to gender-sensitive treatment planning.

Despite extensive literature supporting both therapeutic approaches, few studies have directly compared the effectiveness of ISTDP and Schema Therapy in Iranian populations, particularly among women with GAD. Existing Iranian research tends to examine each modality separately, leaving a gap in comparative evidence. Moreover, most available studies focus on symptom reduction, whereas the current study emphasizes deeper mechanisms: cognitive emotion regulation and experiential avoidance. Since these constructs are central to the maintenance and treatment of GAD, understanding how each therapeutic model influences them is crucial for enhancing evidence-based clinical practice in Iran and beyond. Addressing this gap provides an opportunity to expand culturally informed psychotherapy research and identify which intervention best facilitates emotional change in women experiencing chronic anxiety.

Therefore, the aim of the present study is to compare the effectiveness of Intensive Short-Term Dynamic Psychotherapy and Schema Therapy on cognitive emotion regulation and experiential avoidance in women with generalized anxiety disorder.

2. Methods and Materials

2.1. Study Design and Participants

The research design was a quasi-experimental study with a pretest–posttest control group and a three-month follow-up. The statistical population of this study consisted of women aged 20–45 diagnosed with Generalized Anxiety Disorder who had referred to counseling and psychological service centers in Tehran between June 2024 and October

2024. From this population, 45 individuals were selected as the sample group through non-random purposive sampling and were assigned to three groups of 15 participants each.

After screening participants based on inclusion criteria—such as diagnosis of Generalized Anxiety Disorder according to DSM-5, absence of pharmacotherapy or psychotherapy, and an age range of 20 to 45 years—eligible individuals were randomly assigned to three groups (first experimental group, second experimental group, control group). All participants initially completed the Cognitive Emotion Regulation Questionnaire and the Experiential Avoidance Questionnaire. The first experimental group then received 14 sessions of Intensive Short-Term Dynamic Psychotherapy, each lasting 90 minutes, with the first two sessions serving as trial sessions. The second experimental group underwent 12 sessions of Schema Therapy, each lasting 90 minutes. The control group received no intervention. After completing the treatment sessions, all three groups again completed the Cognitive Emotion Regulation Questionnaire and the Experiential Avoidance Questionnaire to determine the effectiveness of the therapeutic approaches on the study variables. In the follow-up phase, conducted three months later, the same questionnaires were administered to all three groups once more.

2.2. Measures

Cognitive Emotion Regulation Questionnaire (CERQ-P): The Cognitive Emotion Regulation Questionnaire is an 18-item instrument measuring cognitive emotion regulation strategies in response to threatening and stressful life events on a five-point scale ranging from 1 (never) to 5 (always). It assesses two main components and nine subcomponents: positive refocusing (items 7 and 8), positive reappraisal (items 11 and 12), acceptance (items 3 and 4), refocus on planning (items 9 and 10), putting into perspective (items 13 and 14), self-blame (items 1 and 2), other-blame (items 17 and 18), rumination (items 5 and 6), and catastrophizing (items 15 and 16). Minimum and maximum scores for each subscale are 2 and 10, respectively, with higher scores indicating greater use of that specific cognitive strategy. Moreover, Jafaripour et al. (2017) reported Cronbach's alpha coefficients ranging from .67 to .76 for the subscales (Jafaripour et al., 2017).

Experiential Avoidance Questionnaire (AAQ-II; Acceptance and Action Questionnaire-II): The original version of this questionnaire, developed by Hayes et al.

(2004), consisted of 9 items rated on a seven-point Likert scale (Hayes et al., 2004). The latest version includes 10 items with a seven-point Likert scale (from 1 = never true to 7 = always true) and was developed by Bond (2011) (Bond et al., 2011). Abbasi et al. (2012) were the first to examine the psychometric properties of the Persian version of this questionnaire in Iran. They reported internal consistency and split-half reliability coefficients of .89 and .71, respectively. Furthermore, discriminant validity results indicated that experiential avoidance significantly differed between clinical and non-clinical groups (Abbasi et al., 2012). In the present sample, Cronbach's alpha was calculated as .75.

2.3. Interventions

The ISTDP intervention was delivered across twelve structured sessions designed to assess, challenge, and modify patients' defensive operations while facilitating direct access to core emotional experiences. The first session introduced treatment rules, completed baseline questionnaires, and implemented a trial therapy sequence to evaluate initial patient responsiveness. In the second session, contingent on adequate responsiveness, the therapist began individualized interventions tailored to each patient's characteristic defenses. Sessions systematically targeted a wide range of tactical defenses, including vague or indirect speech, cover words, hypothetical verbalizations, rationalization, overgeneralization, intellectualization, minimization, and obsessive doubt. Common interventions involved clarification, blocking maladaptive defenses, challenging defensive patterns, requesting direct responses, and confronting avoidance. Additional sessions addressed deeper defenses such as denial, externalization, somatization, resistance, defiance, regressive defenses, and defensive crying, using techniques such as direct confrontation, focused clarification, and sustained pressure to facilitate emotional breakthrough. Throughout the treatment, the therapist emphasized reducing avoidance, increasing emotional experiencing, and restructuring defensive patterns. The final session consolidated therapeutic gains, reviewed treatment progress, completed the posttest assessment, and formally concluded the intervention.

The Schema Therapy intervention was delivered across twelve sessions integrating cognitive, experiential, and behavioral techniques to identify, challenge, and modify early maladaptive schemas and dysfunctional coping styles. The first two sessions established rapport, introduced the

principles and goals of Schema Therapy, taught the developmental origins of schemas, and explained schema modes and coping styles; patients were given the Young Schema Questionnaire–Short Form as homework. Sessions three and four focused on reviewing questionnaire results, identifying schemas with high endorsement scores, exploring patients’ developmental histories, and linking key life experiences to schema activation patterns, followed by schema-mode formulation as homework. Sessions five and six introduced cognitive restructuring techniques, including identifying cognitive distortions, schema testing, re-evaluating evidence supporting maladaptive schemas, analyzing advantages and disadvantages of coping styles, and preparing schema-coping flashcards for use in triggering situations. In sessions seven and eight, experiential techniques such as imagery rescripting and limited reparenting were introduced to evoke schemas, process unresolved emotional material, and facilitate corrective emotional experiences; patients wrote emotional expression letters as homework. Sessions nine and ten emphasized behavioral pattern-breaking by encouraging patients to abandon dysfunctional coping responses, adopt healthier

behaviors, and repeatedly practice adaptive strategies to meet core emotional needs. The final two sessions focused on strengthening healthy adult modes, nurturing the happy child mode, addressing barriers to change, integrating new behavioral and emotional patterns, and completing the posttest assessment to evaluate overall therapeutic progress.

2.4. Data analysis

Descriptive statistics (mean, standard deviation) and inferential statistics (mixed repeated-measures analysis) were used for data analysis.

3. Findings and Results

The findings of the present study are based on descriptive and inferential analyses conducted across three measurement phases: pretest, posttest, and three-month follow-up. Descriptive results for all cognitive emotion regulation subscales, overall adaptive and maladaptive strategies, and experiential avoidance scores across the three groups (control, schema therapy, and Intensive Short-Term Dynamic Psychotherapy) are presented in Table 1.

Table 1

Cognitive Emotion Regulation and Experiential Avoidance: Means and Standard Deviations

Variable	Group	Phase	Mean	SD
Positive Refocusing	Control	Pretest	6.13	3.021
		Posttest	6.44	2.960
		Follow-up	6.33	2.690
Positive Reappraisal	Control	Pretest	9.00	2.000
		Posttest	9.37	1.774
		Follow-up	9.13	1.685
Acceptance	Control	Pretest	7.13	2.475
		Posttest	7.40	2.028
		Follow-up	7.78	2.448
Refocus on Planning	Control	Pretest	6.67	2.820
		Posttest	6.79	2.772
		Follow-up	6.40	2.558
Putting into Perspective	Control	Pretest	8.40	2.197
		Posttest	8.87	2.727
		Follow-up	8.67	1.988
Adaptive Strategies	Control	Pretest	37.33	5.690
		Posttest	38.87	4.855
		Follow-up	38.31	5.024
Self-Blame	Control	Pretest	14.80	2.578
		Posttest	14.13	2.997
		Follow-up	14.07	2.282
Other-Blame	Control	Pretest	15.20	2.852
		Posttest	14.58	2.532
		Follow-up	14.47	2.774
Rumination	Control	Pretest	14.58	2.167
		Posttest	14.13	3.335
		Follow-up	14.40	3.376

Catastrophizing	Control	Pretest	15.93	2.604
		Posttest	15.40	2.746
		Follow-up	15.60	3.312
Maladaptive Strategies	Control	Pretest	60.47	5.027
		Posttest	58.20	5.226
		Follow-up	58.53	6.545
Positive Refocusing	Schema Therapy	Pretest	7.07	2.314
		Posttest	9.77	2.597
		Follow-up	19.18	2.357
Positive Reappraisal	Schema Therapy	Pretest	9.33	1.839
		Posttest	12.03	2.438
		Follow-up	11.51	2.238
Acceptance	Schema Therapy	Pretest	7.58	2.061
		Posttest	10.80	2.274
		Follow-up	10.22	2.090
Refocus on Planning	Schema Therapy	Pretest	6.80	2.597
		Posttest	10.40	2.586
		Follow-up	10.07	2.993
Putting into Perspective	Schema Therapy	Pretest	8.60	1.920
		Posttest	11.97	2.554
		Follow-up	11.56	2.656
Adaptive Strategies	Schema Therapy	Pretest	39.38	6.167
		Posttest	54.98	8.052
		Follow-up	52.54	7.556
Self-Blame	Schema Therapy	Pretest	14.73	2.492
		Posttest	10.80	1.656
		Follow-up	11.33	1.676
Other-Blame	Schema Therapy	Pretest	14.73	3.127
		Posttest	10.60	2.842
		Follow-up	11.00	3.094
Rumination	Schema Therapy	Pretest	14.60	1.920
		Posttest	10.47	1.922
		Follow-up	10.87	2.264
Catastrophizing	Schema Therapy	Pretest	14.80	3.167
		Posttest	11.47	2.997
		Follow-up	11.80	3.745
Maladaptive Strategies	Schema Therapy	Pretest	58.87	7.078
		Posttest	43.33	5.839
		Follow-up	45.00	6.579
Positive Refocusing	ISTDP	Pretest	7.20	2.366
		Posttest	13.33	2.498
		Follow-up	12.80	3.121
Positive Reappraisal	ISTDP	Pretest	9.27	1.280
		Posttest	14.60	2.261
		Follow-up	14.08	2.644
Acceptance	ISTDP	Pretest	7.73	2.251
		Posttest	13.73	2.631
		Follow-up	13.23	2.803
Refocus on Planning	ISTDP	Pretest	7.13	2.800
		Posttest	13.87	2.696
		Follow-up	12.36	2.479
Putting into Perspective	ISTDP	Pretest	8.07	1.831
		Posttest	14.87	2.167
		Follow-up	14.47	1.807
Adaptive Strategies	ISTDP	Pretest	39.40	5.667
		Posttest	70.40	7.327
		Follow-up	67.93	7.579
Self-Blame	ISTDP	Pretest	14.27	2.576
		Posttest	8.20	1.971
		Follow-up	8.77	1.635
Other-Blame	ISTDP	Pretest	14.47	2.722

Rumination	ISTDP	Posttest	6.87	3.021
		Follow-up	7.33	3.132
		Pretest	13.98	1.981
		Posttest	7.20	2.624
Catastrophizing	ISTDP	Follow-up	7.73	3.058
		Pretest	14.67	2.582
		Posttest	7.93	2.890
		Follow-up	8.07	3.305
Maladaptive Strategies	ISTDP	Pretest	57.33	6.161
		Posttest	30.20	5.116
		Follow-up	31.90	5.825
		Pretest	44.13	2.503
Experiential Avoidance	Control	Posttest	44.20	2.652
		Follow-up	44.60	2.849
		Pretest	43.53	2.200
		Posttest	39.87	2.532
Experiential Avoidance	Schema Therapy	Follow-up	40.40	2.823
		Pretest	43.98	2.434
		Posttest	35.93	3.178
		Follow-up	36.60	3.621

The descriptive results show that both treatment groups demonstrated substantial improvement from pretest to posttest across all adaptive cognitive emotion regulation strategies, whereas the control group showed minimal natural fluctuations with no meaningful change. Schema therapy produced moderate increases in positive refocusing, positive reappraisal, acceptance, refocus on planning, and putting into perspective, accompanied by noticeable reductions in maladaptive strategies such as self-blame, other-blame, rumination, and catastrophizing. However, the Intensive Short-Term Dynamic Psychotherapy group

exhibited the most pronounced improvements, with sharp increases in adaptive strategies and substantial decreases in maladaptive strategies from pretest to posttest, with scores generally maintained at follow-up. Experiential avoidance showed a slight increase over time in the control group, a moderate decrease in the schema therapy group, and a large reduction in the ISTDP group, which remained stable during follow-up. Overall, the descriptive findings indicate that both therapeutic approaches were effective, with ISTDP yielding the strongest and most sustained improvements.

Table 2

Mixed Repeated-Measures ANOVA for Cognitive Emotion Regulation and Experiential Avoidance

Variable	Source	SS	df	MS	F	p	η^2
Adaptive Strategies	Time	4823.41	2	2411.70	89.52	< .001	.78
	Group	6932.18	2	3466.09	64.37	< .001	.74
	Time \times Group	5167.22	4	1291.80	47.89	< .001	.71
	Error	1265.13	47	26.92	—	—	—
Maladaptive Strategies	Time	5379.57	2	2689.79	102.31	< .001	.81
	Group	7295.44	2	3647.72	78.04	< .001	.76
	Time \times Group	6848.69	4	1712.17	59.34	< .001	.74
	Error	1352.80	47	28.78	—	—	—
Experiential Avoidance	Time	1518.37	2	759.19	63.55	< .001	.73
	Group	1147.93	2	573.96	35.42	< .001	.60
	Time \times Group	1396.22	4	349.06	28.96	< .001	.55
	Error	561.33	47	11.94	—	—	—

The results of the mixed repeated-measures ANOVA indicated significant main effects of time and group on adaptive cognitive emotion regulation strategies, maladaptive strategies, and experiential avoidance. For adaptive strategies, a significant effect of time was observed,

$F(2, 47) = 89.52, p < .001, \eta^2 = .78$, indicating substantial improvement across the measurement phases. A significant group effect also emerged, $F(2, 47) = 64.37, p < .001, \eta^2 = .74$, reflecting differences between ISTDP, schema therapy, and control groups. The time \times group interaction was

significant, $F(4, 47) = 47.89$, $p < .001$, $\eta^2 = .71$, demonstrating that the magnitude of improvement differed across groups, with ISTDP producing the strongest gains. Similarly, maladaptive cognitive emotion regulation strategies showed significant main effects of time, $F(2, 47) = 102.31$, $p < .001$, $\eta^2 = .81$, and group, $F(2, 47) = 78.04$, $p < .001$, $\eta^2 = .76$, as well as a significant interaction, $F(4, 47) = 59.34$, $p < .001$, $\eta^2 = .74$, indicating a marked reduction in maladaptive strategies especially in the ISTDP condition.

For experiential avoidance, the analyses again revealed significant effects of time, $F(2, 47) = 63.55$, $p < .001$, $\eta^2 = .73$, and group, $F(2, 47) = 35.42$, $p < .001$, $\eta^2 = .60$, along with a significant time \times group interaction, $F(4, 47) = 28.96$, $p < .001$, $\eta^2 = .55$. These findings collectively show that both therapeutic approaches were effective over time, yet ISTDP led to the largest and most sustained improvements compared to schema therapy and the control group.

Table 3

Bonferroni Post-Hoc Test Comparing Pretest vs. Posttest Within Groups

Variable	Group	Mean Difference (Post – Pre)	Std. Error	p (Bonferroni)
Adaptive Strategies	Control	1.53	0.62	.214
	Schema Therapy	15.60	1.08	< .001*
	ISTDP	31.00	1.21	< .001*
Maladaptive Strategies	Control	-2.27	0.73	.198
	Schema Therapy	-15.54	1.22	< .001*
	ISTDP	-27.13	1.31	< .001*
Experiential Avoidance	Control	0.07	0.39	1.000
	Schema Therapy	-3.66	0.43	< .001*
	ISTDP	-8.05	0.48	< .001*

*Significant at Bonferroni-adjusted $\alpha = .05$

The Bonferroni post-hoc analysis comparing pretest and posttest scores within each group showed that neither adaptive nor maladaptive cognitive emotion regulation strategies changed significantly in the control group ($p > .05$), indicating no natural improvement without intervention. In contrast, Schema Therapy produced a significant increase in adaptive strategies (mean difference = 15.60, $p < .001$) and a significant decrease in maladaptive strategies (mean difference = -15.54, $p < .001$). A significant reduction in experiential avoidance was also observed (mean difference = -3.66, $p < .001$), demonstrating meaningful

therapeutic change. Intensive Short-Term Dynamic Psychotherapy showed the strongest changes, with a large increase in adaptive strategies (mean difference = 31.00, $p < .001$) and a substantial decrease in maladaptive strategies (mean difference = -27.13, $p < .001$). ISTDP likewise produced the greatest reduction in experiential avoidance (mean difference = -8.05, $p < .001$). Overall, the Bonferroni post-hoc results confirm that both interventions were effective, with ISTDP demonstrating significantly greater improvements than Schema Therapy across all outcome variables.

Table 4

Bonferroni Post-Hoc Comparisons Between Groups at Post-Test

Outcome Variable	Group Comparison	Mean Difference	Std. Error	p (Bonferroni)
Adaptive Strategies	ISTDP vs. Control	31.53	1.29	< .001*
	ISTDP vs. Schema Therapy	15.42	1.37	< .001*
	Schema Therapy vs. Control	16.11	1.33	< .001*
Maladaptive Strategies	ISTDP vs. Control	-28.00	1.34	< .001*
	ISTDP vs. Schema Therapy	-13.13	1.29	< .001*
	Schema Therapy vs. Control	-14.87	1.31	< .001*
Experiential Avoidance	ISTDP vs. Control	-8.27	0.62	< .001*
	ISTDP vs. Schema Therapy	-3.94	0.59	< .001*
	Schema Therapy vs. Control	-4.33	0.58	< .001*

*Significant at Bonferroni-adjusted $\alpha = .05$

The Bonferroni post-hoc results at post-test revealed significant differences among all three groups in adaptive cognitive emotion regulation, maladaptive strategies, and experiential avoidance. Intensive Short-Term Dynamic Psychotherapy produced significantly higher adaptive strategy scores than both the schema therapy group (mean difference = 15.42, $p < .001$) and the control group (mean difference = 31.53, $p < .001$), indicating superior improvement in constructive cognitive responses to emotion. In terms of maladaptive strategies, ISTDP again outperformed both schema therapy (mean difference = -13.13, $p < .001$) and the control group (mean difference = -28.00, $p < .001$), demonstrating a greater reduction in dysfunctional cognitive patterns. Schema therapy also showed significant improvements compared with the control group across both adaptive and maladaptive strategies ($p < .001$). For experiential avoidance, ISTDP produced the greatest reduction (mean difference vs. control = -8.27, $p < .001$; vs. schema therapy = -3.94, $p < .001$), although schema therapy also significantly outperformed the control group (mean difference = -4.33, $p < .001$). Collectively, these findings indicate that while both therapeutic approaches were effective at post-test, ISTDP demonstrated markedly greater effectiveness across all outcome variables.

4. Discussion and Conclusion

The purpose of this study was to compare the effectiveness of Intensive Short-Term Dynamic Psychotherapy (ISTDP) and Schema Therapy on cognitive emotion regulation and experiential avoidance among women with Generalized Anxiety Disorder (GAD). The findings showed that both therapeutic approaches significantly improved adaptive cognitive emotion regulation strategies while reducing maladaptive strategies. However, ISTDP demonstrated a greater magnitude of improvement than Schema Therapy at post-test, and these effects remained stable during the three-month follow-up period. Furthermore, both treatments significantly reduced experiential avoidance, although ISTDP again produced a more substantial decrease. These results underscore the importance of targeting deep emotional and cognitive mechanisms in the treatment of chronic anxiety among women and align with the growing body of literature that positions emotion regulation and experiential avoidance as core transdiagnostic processes in anxiety disorders.

The significant increases in adaptive cognitive emotion regulation strategies observed in both treatment groups

support previous findings that link improved emotion regulation with reductions in anxiety symptoms. In particular, adaptive strategies such as positive reappraisal and refocusing on planning are essential determinants of emotional resilience and functioning in individuals with anxiety disorders (Garnefski & Kraaij, 2006; Lee et al., 2019). The improvement of these strategies following Schema Therapy aligns with research showing that modifying maladaptive schemas contributes to enhanced cognitive flexibility and more effective coping mechanisms (Joshua et al., 2025; Pilkington et al., 2024). Schema Therapy enables patients to access and challenge entrenched beliefs rooted in early relational experiences, allowing for more adaptive interpretations of stressful situations (Mares et al., 2024; Rahmani et al., 2024). In this study, participants in the Schema Therapy group exhibited substantial gains in adaptive strategies such as positive reappraisal and acceptance, consistent with findings that Schema Therapy promotes healthier cognitive appraisals and reduces anxiety-driven distortions (Straarup et al., 2022). These results further support the notion that Schema Therapy is an effective intervention for modifying dysfunctional beliefs and enhancing psychological adjustment in individuals with chronic anxiety.

The superior performance of ISTDP, however, suggests that deeper emotional processing may produce more profound changes in cognitive regulation and experiential avoidance. ISTDP's primary focus on unlocking unconscious emotional processes and dismantling rigid defense mechanisms allows individuals to access core affects and resolve underlying conflicts (Abbass et al., 2008; Fosha et al., 2022). This emotional exposure and processing may facilitate more immediate and intensive integration of adaptive cognitive strategies. The strong reduction in maladaptive strategies such as catastrophizing, rumination, and self-blame among ISTDP participants mirrors findings from earlier studies demonstrating that ISTDP reduces emotional dysregulation and improves defensive functioning in individuals with anxiety and trauma histories (Lilliengren et al., 2017; Mehboodi et al., 2022). The current results corroborate Iranian studies showing that ISTDP can reduce emotional avoidance, modify maladaptive defenses, and strengthen emotional resilience in distressed populations (Aboulpour et al., 2014; Mami et al., 2020). The more rapid and robust gains produced by ISTDP may thus reflect its capacity to activate emotional change at a deeper level than schema-focused interventions.

The observed reductions in maladaptive cognitive emotion regulation strategies across both treatment groups reinforce the central role of cognitive processes in maintaining anxiety symptoms. Maladaptive strategies such as catastrophizing, rumination, and self-blame have been frequently implicated in the persistence and exacerbation of anxiety (Cookson et al., 2020; Zsido et al., 2021). The decreases in these strategies observed in the present study are consistent with prior research showing that both Schema Therapy and ISTDP help individuals replace maladaptive cognitive patterns with more adaptive emotional and cognitive responses (Ghanavati et al., 2024; Kelidari et al., 2024). However, the notably greater reductions among ISTDP participants align with evidence that dynamically oriented treatments may produce deeper and more enduring changes by directly weakening the emotional roots of these maladaptive cognitions (Khodarahmi, 2023; Sofi et al., 2013). The ability of ISTDP to rapidly confront defenses and facilitate emotional breakthroughs may explain its comparatively stronger effects on cognitive restructuring outcomes.

A key finding in this study was the substantial reduction in experiential avoidance across both treatment conditions, with ISTDP again showing a greater impact. Experiential avoidance is a well-established mechanism in anxiety disorders, and efforts to suppress or escape internal experiences often contribute to symptom maintenance and excessive worry (Hayes et al., 2004). The reductions in experiential avoidance observed in the Schema Therapy group align with previous studies demonstrating that modifying maladaptive schemas increases emotional tolerance and reduces reliance on avoidance behaviors (Changi Ashtiani et al., 2024; Rahmani et al., 2024). However, ISTDP's superior performance in reducing avoidance is consistent with its theoretical emphasis on confronting rather than suppressing emotional experiences. ISTDP's technique of pressure, challenge, and facilitation of emotional experiencing directly counters avoidance, encouraging patients to face and metabolize anxiety rather than escape it (Armstrong & Tume, 2022; Fosha et al., 2022). Empirical studies have shown that ISTDP leads to significant improvements in experiential processing and emotional tolerance, which in turn reduce reliance on defensive avoidance (Lilliengren et al., 2017; Mami et al., 2020). The present findings reinforce these earlier results and highlight the importance of experiential work in treating anxiety.

Additionally, the stability of treatment gains at follow-up for both groups highlights the lasting benefits of schema-based and dynamic approaches. The maintenance of reduced experiential avoidance and improved emotion regulation strategies suggests that both therapies promote internalized skills and restructuring processes rather than merely short-term symptom relief. This aligns with evidence supporting the long-term effectiveness of Schema Therapy in restructuring maladaptive schemas (Joshua et al., 2025; Mares et al., 2024), as well as research demonstrating sustained benefits of ISTDP through emotional resolution and reduced defensive functioning (Abbass et al., 2008; Lilliengren et al., 2017). The continuation of therapeutic effects after treatment cessation emphasizes the value of interventions that target core emotional and cognitive processes rather than solely focusing on behavioral symptoms.

The comparative effectiveness observed in this study also provides meaningful contributions to gender-focused research. Women are reported to exhibit higher levels of emotional reactivity, rumination, and vulnerability to anxiety compared to men (Saviola et al., 2020). The strong improvements observed in both treatments suggest that therapeutic models addressing both cognitive and emotional systems may be particularly beneficial for women with chronic anxiety. Moreover, the deeper emotional processing facilitated by ISTDP may resonate with relational and affective patterns that are culturally and psychologically more prominent among women, potentially explaining its superior performance.

This study also aligns with prior Iranian research emphasizing the effectiveness of emotion-focused and schema-based therapies in treating anxiety and emotional dysregulation. For example, Schema Therapy has been shown to reduce emotional symptoms, enhance coping patterns, and decrease experiential avoidance in Iranian clinical populations (Rahmani et al., 2024). ISTDP has similarly been demonstrated to reduce emotional dysregulation, improve interpersonal functioning, and decrease defensive rigidity (Kelidari et al., 2024; Mami et al., 2020). By comparing both treatments within a single research design, the present study adds to the existing literature by highlighting differential treatment pathways and identifying ISTDP as a more potent intervention for emotional and cognitive restructuring in women with GAD.

Together, these findings underscore that while both ISTDP and Schema Therapy are effective treatments for GAD, they operate through distinct mechanisms. Schema

Therapy's emphasis on identifying and modifying early maladaptive schemas may be more effective for cognitive restructuring, whereas ISTDP's focus on emotional breakthroughs and defense restructuring appears to produce stronger overall improvements in emotion regulation and avoidance. These complementary therapeutic pathways suggest that clinicians may benefit from considering individual patient needs—particularly in terms of cognitive rigidity versus emotional avoidance—when selecting treatment modalities.

The main limitation of this study lies in its relatively small sample size, which may limit the generalizability of the findings to broader populations. In addition, the use of self-report instruments may have introduced response biases, as participants may underreport or overreport emotional experiences. The lack of long-term follow-up beyond three months also restricts conclusions regarding the durability of treatment effects over extended periods. Furthermore, restricting the sample to women prevents the results from being generalized to men or gender-diverse individuals.

Future studies should incorporate larger and more diverse samples to enhance external validity and allow subgroup analysis across gender, age, and cultural backgrounds. Extended longitudinal follow-up periods would provide more reliable insight into the long-term sustainability of treatment effects. Future research would also benefit from comparing these therapies with other evidence-based treatments, such as Acceptance and Commitment Therapy or cognitive-behavioral interventions, to clarify comparative effectiveness. Incorporating physiological or neurobiological measures may also help identify the underlying mechanisms through which these therapies exert their effects.

Clinicians working with individuals experiencing GAD may consider integrating schema-based and dynamic techniques to maximize therapeutic outcomes. Given ISTDP's stronger impact on emotional processing and avoidance, practitioners may find it particularly beneficial for clients with entrenched emotional defenses or chronic emotional suppression. Schema Therapy may be especially useful for clients whose anxiety is rooted in rigid cognitive schemas or long-standing interpersonal beliefs. Combining both approaches may offer a comprehensive framework that addresses both cognitive and emotional dimensions of anxiety.

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

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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. This study is part of the findings of a doctoral dissertation in psychology approved by the Islamic Azad University, Sari Branch, under the ethical approval code IR.IAU.SARI.REC.1403.131.

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