



Comparing the Effectiveness of Young's Schema Therapy and Intensive Short-Term Dynamic Psychotherapy on Psychological Resilience in Kidney Patients

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ABSTRACT

In addition to physical problems, kidney patients face several psychological difficulties, including reduced psychological resilience. Objective: This study aimed to compare the effectiveness of Young's schema therapy and intensive short-term dynamic psychotherapy on psychological resilience in kidney patients. This quasi-experimental study used a pretest-posttest design with a three-month follow-up and a control group. The statistical population consisted of kidney patients in Mashhad, Iran, in 2023. Forty-five participants were selected through convenience sampling and allocated to three equal groups of 15 participants: two experimental groups and one control group. The first experimental group received Young's schema therapy in eight sessions, and the second experimental group received intensive short-term dynamic psychotherapy in fifteen sessions. The control group received no intervention during the study period. Psychological resilience was assessed using the Connor-Davidson Resilience Scale. Data were analyzed using repeated-measures analysis of variance and Bonferroni post hoc tests. Both therapeutic approaches were effective in increasing psychological resilience in kidney patients compared with the control group, and the effects remained stable at the three-month follow-up. Comparison of the two treatments showed no significant difference between Young's schema therapy and intensive short-term dynamic psychotherapy in psychological resilience; both approaches were equally effective ($P < 0.001$ for treatment effects; $P > 0.05$ for between-treatment comparison). The findings suggest that, within the limits of a small feasibility-based quasi-experimental design, both Young's schema therapy and intensive short-term dynamic psychotherapy were associated with sustained improvements in self-reported psychological resilience among kidney patients.

Keywords: Intensive short-term dynamic psychotherapy; Kidney patients; Psychological resilience; Young's schema therapy

1. Introduction

Chronic kidney disease is a major public health problem with increasing clinical, psychological, social, and economic consequences. Its global burden has grown alongside major risk factors such as diabetes, hypertension, obesity, and unhealthy lifestyle patterns (1, 2). Beyond biological deterioration and treatment burden, kidney disease often imposes long-term limitations on daily functioning, family roles, employment, social participation, and perceived control over life. These difficulties may expose patients to persistent stress, anxiety, depressive symptoms, social withdrawal, and reduced quality of life (3, 4).

Kidney patients, particularly those who require repeated medical follow-up or dialysis, are commonly confronted with dietary restrictions, physical fatigue, uncertainty about disease progression, financial pressure, and repeated contact with health-care systems (5, 6). These chronic stressors may weaken psychological adjustment. Psychological resilience is therefore a clinically relevant construct in this population. Resilience refers to the capacity to maintain or regain psychological balance after stress, adversity, or trauma (7). In chronic disease, resilience is not simply a personality trait; it can be understood as a modifiable psychological resource that helps patients manage uncertainty, tolerate distress, sustain hope, and use adaptive coping strategies (6, 8).

Low resilience may intensify the subjective burden of chronic kidney disease. Patients with lower resilience may perceive illness-related limitations as less controllable, may show greater vulnerability to anxiety and depressive responses, and may have more difficulty maintaining treatment adherence and social functioning (4, 8). Strengthening resilience can therefore be considered an important target for psychological interventions in kidney care. Interventions that modify maladaptive emotional and cognitive patterns may improve coping capacity and promote more stable adaptation to chronic illness.

Intensive short-term dynamic psychotherapy is a psychodynamic intervention that focuses on identifying and processing avoided emotions, reducing maladaptive defenses, and increasing awareness of unconscious conflicts (9, 10). In this model, psychological symptoms are partly maintained by defensive avoidance of painful emotions and unresolved internal conflicts. Treatment aims to help

patients directly experience and regulate emotions rather than avoid them through defensive patterns. By increasing emotional tolerance, insight, and adaptive affect regulation, intensive short-term dynamic psychotherapy may enhance the patient's capacity to face stressors associated with chronic illness (9).

Schema therapy is an integrative treatment model that combines cognitive-behavioral, attachment, experiential, Gestalt, and psychodynamic elements (11). It is based on the assumption that early maladaptive schemas develop when core emotional needs are not adequately met during childhood or adolescence. These schemas may shape persistent beliefs about the self, others, and the world and may contribute to maladaptive coping styles. Schema therapy targets these deep cognitive-emotional patterns and aims to strengthen the healthy adult mode, modify maladaptive schemas, and promote more adaptive responses to distress (11). Evidence from health-related and clinical populations suggests that maladaptive schemas can be associated with depression and psychological vulnerability in kidney- and liver-related contexts (12).

Both intensive short-term dynamic psychotherapy and schema therapy appear theoretically relevant for improving resilience. However, they may operate through different mechanisms. Intensive short-term dynamic psychotherapy primarily emphasizes emotional experience, defense restructuring, and tolerance of anxiety, whereas schema therapy emphasizes modification of early maladaptive schemas and maladaptive coping modes (9, 11). Direct comparison of these two approaches in kidney patients is limited. Determining whether one intervention is superior, or whether both are similarly effective, may help clinicians select appropriate psychological treatments for patients facing chronic kidney disease.

The present study aimed to compare the effectiveness of intensive short-term dynamic psychotherapy and schema therapy on psychological resilience in kidney patients. The main research question was whether these two therapeutic approaches differ in their effect on psychological resilience across pretest, posttest, and three-month follow-up assessments.

2. Methods and Materials

2.1. Study Design and Participants

This quasi-experimental study used a pretest-posttest design with a three-month follow-up and a control group. The statistical population consisted of kidney patients in Mashhad, Iran, in 2023. Forty-five participants were selected through convenience sampling and then allocated to three equal groups of 15 participants each: Young's schema therapy, intensive short-term dynamic psychotherapy, and control. Because recruitment was based on convenience sampling rather than population-based random sampling, the study is reported as quasi-experimental. The first experimental group received Young's schema therapy in eight sessions, the second experimental group received intensive short-term dynamic psychotherapy in fifteen sessions, and the control group received no intervention during the study period.

2.2. Sample Size and Allocation

The sample size was determined according to the available eligible patients and equal allocation across the three study arms ($n = 15$ per group). No formal a priori statistical power analysis was reported; therefore, the sample size should be interpreted as a feasibility-based sample and this issue is acknowledged as a methodological limitation. Group allocation was performed after recruitment to keep the three study arms equal in size. Inclusion criteria were age between 25 and 40 years, at least a high-school diploma, willingness to participate, absence of severe personality disorder, no concurrent psychological treatment during the study, and absence of psychotic-level depression. Exclusion criteria included absence from more than two treatment sessions, unwillingness to continue participation, and withdrawal of consent.

2.3. Interventions

The schema therapy intervention consisted of eight sessions based on Young's protocol (11). The sessions included introduction to the treatment structure, coping styles, schema modes, validation of early emotional experiences, cognitive and experiential techniques, imagery rescripting, empathic confrontation, strengthening of healthy

modes, and planning of adaptive target behaviors. The intervention was delivered according to a predefined session outline to improve procedural consistency across participants. The intensive short-term dynamic psychotherapy intervention consisted of fifteen sessions and was organized according to core ISTDP principles (9, 10). The first session included treatment rules and an initial therapy interview. Subsequent sessions focused on identifying and challenging tactical defenses, including vague language, indirect speech, intellectualization, rumination, rationalization, generalization, distraction, denial, externalization, ambiguity, procrastination, obsessive doubt, somatization, acting out, defiance, defensive crying, and other regressive defenses. The final sessions were used to consolidate treatment gains and plan follow-up assessment. Treatment content was also organized around a predefined therapeutic sequence; however, no independent treatment-fidelity rating was conducted.

2.4. Measure

Psychological resilience was assessed using the Connor-Davidson Resilience Scale (CD-RISC; (7)). The scale includes 25 items scored on a five-point Likert scale from 0 to 4. It assesses personal competence, tolerance of negative affect, positive acceptance of change, self-control, and spiritual influences. Higher scores indicate greater resilience. In previous Iranian validation work, acceptable reliability has been reported (13). In the present study, Cronbach's alpha for the scale was 0.742.

2.5. Statistical Analysis

Data were analyzed using descriptive statistics, repeated-measures analysis of variance, and Bonferroni post hoc tests in SPSS version 27. Normality was assessed using the Shapiro-Wilk test, homogeneity of variances using Levene's test, and equality of covariance matrices across repeated measures using Mauchly's test of sphericity. Statistical significance was set at $P < 0.05$. Effect sizes were reported as partial eta squared (η^2), and pairwise comparisons were interpreted using Bonferroni-adjusted probability values.

3. Findings and Results

The mean ages of participants in the intensive short-term dynamic psychotherapy, schema therapy, and control groups were 36.67, 36.80, and 35.93 years, respectively. One-way analysis of variance showed no significant age difference among the three groups ($F = 0.909, P = 0.411$). In the intensive short-term dynamic psychotherapy group, 80.0% of participants were women and 20.0% were men. In both

the schema therapy and control groups, 73.3% were women and 26.7% were men.

Table 1 presents the mean and standard deviation of psychological resilience by group and measurement stage. Baseline scores were similar across the three groups. After treatment, resilience increased in both intervention groups but remained nearly unchanged in the control group. The gains in the intervention groups were maintained at the three-month follow-up.

Table 1

Mean and standard deviation of psychological resilience by group and measurement stage

Stage	ISTDP Mean	ISTDP SD	Schema Therapy Mean	Schema Therapy SD	Control Mean	Control SD
Pretest	75.73	3.80	75.20	3.38	75.33	4.42
Posttest	85.51	5.48	86.07	2.71	76.00	2.80
Follow-up	86.13	3.60	87.13	2.32	76.20	3.00

The assumptions required for repeated-measures analysis were examined. The Shapiro-Wilk test indicated that the distribution of the study variable was acceptable at the evaluated stages and groups. Levene's test supported

homogeneity of variances, and Mauchly's test indicated that the covariance assumption for repeated measures was satisfied.

Table 2

Repeated-measures analysis of variance for psychological resilience

Source	SS	df	MS	F	P; η^2
Group	1470.18	2	735.09	33.41	<0.001 / 0.61
Time	1521.64	2	760.82	145.41	<0.001 / 0.78
Group x Time	602.18	4	150.54	28.77	<0.001 / 0.58

Repeated-measures analysis showed significant main effects of group and time and a significant group-by-time interaction for psychological resilience (Table 2). The effect

sizes were interpreted as partial eta squared values, indicating large effects for group, time, and the group-by-time interaction.

Table 3

Bonferroni pairwise comparisons across assessment stages

Base stage	Comparison stage	Mean difference	SE	P
Pretest	Posttest	-6.78	0.42	<0.001
Pretest	Follow-up	-7.42	0.56	<0.001
Posttest	Follow-up	0.64	0.46	0.504

Bonferroni comparisons showed that resilience scores increased significantly from pretest to posttest and from pretest to follow-up. The difference between posttest and

follow-up was not statistically significant, indicating that the improvement remained stable over time.

Table 4

Bonferroni comparisons among groups at each assessment stage

Stage	Group I	Group J	Mean difference (I-J)	SE	P
Pretest	Schema therapy	ISTDP	-1.33	1.40	1.000
Pretest	Schema therapy	Control	0.13	1.40	1.000
Pretest	ISTDP	Control	1.47	1.40	0.900
Posttest	Schema therapy	ISTDP	0.60	1.08	1.000
Posttest	Schema therapy	Control	10.07	1.08	<0.001
Posttest	ISTDP	Control	9.47	1.08	<0.001
Follow-up	Schema therapy	ISTDP	1.00	1.10	1.000
Follow-up	Schema therapy	Control	10.93	1.10	<0.001
Follow-up	ISTDP	Control	9.93	1.10	<0.001

Group comparisons indicated no significant difference among groups at pretest. At posttest and follow-up, both intervention groups differed significantly from the control group. However, schema therapy and intensive short-term dynamic psychotherapy did not differ significantly from each other at either posttest or follow-up.

4. Discussion and Conclusion

The present study compared the effectiveness of schema therapy and intensive short-term dynamic psychotherapy on psychological resilience in kidney patients. The findings showed that both interventions significantly improved resilience compared with the control condition. The effect was maintained at the three-month follow-up, suggesting that the therapeutic gains were not limited to immediate posttreatment assessment. However, the two active treatments did not differ significantly from each other. Therefore, the hypothesis that one treatment would be superior to the other for improving resilience was not supported. The effectiveness of intensive short-term dynamic psychotherapy may be explained by its focus on emotional processing and defense restructuring (9, 10). Kidney patients may experience fear, anger, helplessness, sadness, or uncertainty related to disease progression and treatment burden (3, 4). When such emotions are avoided or defended against, psychological distress may become chronic and coping capacity may decline. By helping patients recognize defenses and directly process previously avoided emotions, intensive short-term dynamic psychotherapy can increase tolerance of anxiety, strengthen emotional awareness, and improve adaptive coping. These processes are closely related to resilience because resilient

functioning requires the capacity to experience stress without becoming overwhelmed or rigidly avoidant.

The effectiveness of schema therapy may be explained by its focus on early maladaptive schemas and coping modes (11). Chronic illness can activate deeply rooted beliefs related to vulnerability, defectiveness, dependence, failure, emotional deprivation, or loss of control. Such schemas may influence how patients interpret medical symptoms, treatment demands, interpersonal support, and future prospects. Schema therapy helps patients identify these patterns, challenge maladaptive beliefs, and strengthen the healthy adult mode. This may improve perceived self-efficacy, emotional stability, and flexible problem-solving, all of which contribute to psychological resilience.

Although the two treatments differ in their theoretical foundations and techniques, both may converge on common therapeutic outcomes relevant to resilience. Both approaches can increase self-awareness, reduce maladaptive avoidance, improve emotional regulation, and support more adaptive responses to stress (9, 11). The absence of a significant difference between the two active treatments may also be related to the relatively small group sizes, the shared nonspecific therapeutic factors common to structured psychotherapy, and the possibility that resilience is influenced by broad emotional regulation and coping processes rather than by one treatment-specific pathway alone. In clinical settings, the choice between schema therapy and intensive short-term dynamic psychotherapy may therefore depend on patient preference, therapist training, treatment availability, and the dominant psychological difficulties presented by the patient. The results have practical implications for psychological care in

kidney patients. Routine medical care often focuses primarily on biological markers, dialysis schedules, medication adherence, and physical complications. However, the present findings support the inclusion of structured psychological interventions as part of comprehensive kidney care. Strengthening resilience may help patients maintain treatment engagement, tolerate uncertainty, and preserve functioning despite chronic illness demands. These implications are exploratory and require confirmation in larger randomized studies with clinically characterized renal subgroups and active attention-control conditions.

This study has several limitations. First, the sample size was relatively small and was selected by convenience sampling from kidney patients in one city, which limits generalizability. Second, no formal a priori power analysis was reported, and the sample size should therefore be interpreted as feasibility-based. Third, resilience was measured using a self-report questionnaire; future studies should include clinical interviews, observer-rated measures, and behavioral indicators of adaptation. Fourth, the follow-up period was limited to three months. Longer follow-up periods are needed to determine whether treatment effects remain stable over six months or one year. Fifth, the study did not include blinding, an attention-control condition, or independent treatment-fidelity assessment. Sixth, detailed clinical kidney-related variables such as CKD stage, dialysis modality, disease duration, comorbid diabetes or hypertension, and medication status were not analyzed. Seventh, the study was not prospectively registered as a clinical trial. Finally, the study did not examine potential mediators such as emotion regulation, schema change, defense mechanisms, or treatment alliance. Future research should use multicenter randomized designs, larger samples, longer follow-up periods, clinical kidney-related indicators, and mediation analyses to clarify how each treatment improves resilience. A central limitation is that the design cannot separate treatment-specific effects from nonspecific therapist contact, expectancy effects, or repeated-assessment effects. In conclusion, within the limits of a small feasibility-based quasi-experimental study, Young's schema therapy and intensive short-term dynamic psychotherapy were both associated with improvements in self-reported psychological resilience among kidney patients compared with a no-

treatment control condition. No statistically significant difference was observed between the two active treatments at posttest or follow-up; however, this finding should not be interpreted as evidence of equivalence because the study was not designed as an equivalence trial and the two interventions differed in treatment dose. Future studies should use larger randomized samples, active control conditions, treatment-fidelity monitoring, renal clinical indicators, and longer follow-up periods.

Authors' Contributions

This article was extracted from the doctoral dissertation of the first author. Shirin Esmaili contributed to study implementation, data collection, initial analysis, and manuscript drafting. Mustafa Bolghan-Abadi supervised the study, contributed to conceptualization and methodology, and critically revised the manuscript. Ahmad Mansouri served as advisor and contributed to interpretation of findings and critical revision of the manuscript. All authors read and approved the final version of the manuscript.

Declaration

The authors declare that artificial intelligence tools were used only to assist with language editing, translation, and improvement of the manuscript's readability. All conceptualization, study design, data collection, data analysis, interpretation of findings, and final approval of the manuscript were performed by the authors. The authors take full responsibility for the accuracy, integrity, and originality of the content.

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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Ethics Considerations

The study placed a high emphasis on ethical considerations. Informed consent obtained from all participants, ensuring they are fully aware of the nature of the study and their role in it. Confidentiality strictly maintained, with data anonymized to protect individual privacy. The study adhered to the ethical guidelines for research with human subjects as outlined in the Declaration of Helsinki. This study was approved by the Ethics Committee of Islamic Azad University, Neyshabur Branch (IR.IAU.NEYSHABUR.REC.1403.039). Written informed consent was obtained from all participants before enrollment.

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