Review

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Effectiveness of Schema Therapy in Clinical Disorders: A Systematic Review

Klinik Bozukluklarda Şema Terapinin Etkinliği: Sistematik Bir Derleme

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ABSTRACT

Given that schema therapy was an efficacious method in the treatment of personality disorders, studies on the applicability of this method in a wider clinical spectrum were initiated. Following, clinical applications and studies have shown that schema therapy-based interventions have a healing power on symptoms in clinical diagnoses such as depression, anxiety disorders and post-traumatic stress disorder (PTSD). The aim of this study is to systematically compile research findings examining the effectiveness of schema therapy on clinical disorders through randomized clinical trials. For this purpose, Google Scholar, PsycARTICLES, PubMed, ProQuest, Scopus, Web of Science and Wiley Online Library electronic databases were searched. When the inclusion criteria were applied to the studies obtained, nine eligible studies were finally included. The studies included covers clinical disorders such as depression, anxiety disorders, PTSD, obsessive-compulsive disorder (OCD), and eating disorders. The findings of the studies generally reveal that Schema therapy-based interventions are effective methods in reducing the symptoms of these disorders. However, the effectiveness of schema therapy has generally been examined in comparison with other therapy methods such as cognitive behavioral therapy (CBT), and some studies have observed that applications based on both schools are similarly effective. However, despite the limited findings, schema therapy yields positive results even in short-term applications. Thus, schema therapy can be considered as an important alternative in the treatment of clinical disorders with presence of symptoms.

Keywords: Schema therapy, clinical disorders, randomized controlled trials

ÖZ

Şema terapinin kişilik bozukluklarının tedavisinde etkin bir yöntem olduğu anlaşıldıktan sonra bu yöntemin daha geniş bir klinik yelpazede uygulanabilirliği üzerine incelemeler başlamıştır. Buradan hareketle yürütülen klinik uygulamalar ve çalışmalarda, depresyon, anksiyete bozuklukları ve travma ve stresörle ilişkili bozukluklar (TSSB) gibi klinik bozukluklarda da şema terapi temelli müdahalelerin belirtiler üzerinde iyileştirici gücü olduğu ortaya koyulmuştur. Bu çalışmanın amacı, şema terapinin klinik bozukluklar üzerindeki etkinliğini seçkisiz kontrollü çalışmalarla inceleyen araştırma bulgularını sistematik bir şekilde derlemektir. Bu amaçla, Google Akademik, PsycARTICLES, PubMed, ProQuest, Scopus, Web of Science ve Wiley Online Library elektronik veri tabanları taranmıştır. Tarama sonucunda elde edilen çalışmalara dahil etme kriterleri uygulandığında dokuz makaleye ulaşılmıştır. Değerlendirmeye alınan çalışmalar, depresyon, anksiyete bozuklukları, TSSB, obsesif-kompulsif bozukluk ve ilişkili bozukluklar (OKB) ve beslenme ve yeme bozuklukları gibi klinik bozuklukları kapsayacak şekilde çeşitlilik göstermektedir. Araştırmaların bulguları, genel olarak şema terapi temelli müdahalelerin bu bozukluklarda belirtileri azaltmada etkili bir yöntem olduğunu ortaya koymaktadır. Bununla birlikte, şema terapinin etkinliği, genellikle bilişsel davranışçı terapi gibi diğer terapi yöntemleriyle karşılaştırmalı olarak ele alınmış ve bazı çalışmalarda her iki ekol temelli uygulamaların benzer derecede etkili olduğu gözlenmiştir. Ancak kısıtlı bulgulara rağmen şema terapinin kısa süreli uygulamalarda dahi olumlu sonuçlar verdiği ve özellikle uzun vadeli etkiler açısından umut vadettiği vurgulanmaktadır. Derlenen bulgular, şema terapinin belirgin belirtilerle seyreden klinik bozukluklara yönelik tedavilerde önemli bir alternatif olarak değerlendirilebileceğini önermektedir.

Anahtar sözcükler: Şema terapi, klinik bozukluklar, seçkisiz kontrollü çalışmalar

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Introduction

Psychological disorders can lead to difficulties in family relations, social interactions, and professional life by affecting an individual's life quality and social functioning significantly. While DSM-IV-TR Axis I encompasses disorders characterized by prominent symptoms, Axis II disorders include clinical disorders with long-lasting, chronic, and pervasive personality patterns (APA, 2000, 2013). Since the axial system is no longer in use with the introduction of DSM-5, the disorders, which do not fall under personality disorders, such as depressive disorders, anxiety disorders, obsessive compulsive and related disorders as well as trauma and stressor-related disorders, are now referred to as clinical disorders in the literature. Psychotherapy and pharmacotherapy play an important role in the treatment of these disorders (Kessler et al. 2005). Schema therapy was initially developed to address chronic and resistant life patterns, chronic personality disorders, and clinical cases that do not respond to traditional cognitive behavioral therapy (Young et al. 2003). Applications of schema therapy-based interventions have been expanded for use in the treatment of other clinical disorders following the successful results obtained in the treatment of personal disorders.

Schema therapy is a holistic approach that incorporates interventions from cognitive, behavioral, psychodynamic, and existential psychology (Young et al. 2003). Early maladaptive schemas (EMS) and schema modes are two key concepts in schema therapy. EMS arises as a result of failure to meet emotional needs in the early period. It is a pervasive theme or a pattern that substantially disrupts functions, and it consists of memories, emotions, cognitions, and physical sensations. It is concerned with the relationship that one has with oneself and others, and it develops throughout childhood and adolescence and becomes more elaborate throughout one's life (Young et al. 2003). In schema therapy, 18 EMS and five schema domains are defined as part of the core universal emotional needs that are not met in the early period (Table 1). Secure attachment, sense of autonomy, efficacy-identity, realistic limits-self-control, free expression of feelings, and spontaneity-play are among the core universal emotional needs in question. EMS that are developed in the early period are known to affect individuals' relationships and psychological health (Young et al. 2003, Tariq et al. 2021, Gra˙zka and Strzelecki 2023).

Schema modes, as another aspect of schema therapy, are designed to demonstrate rapid emotional fluctuations in borderline disorders in particular (Young et al. 2003, Arntz and Jacob 2012, Farrel and Shaw 2012). Based on the concept of mode, the reason why individuals experience severe mood swings is that a trigger in the surroundings evokes an intense emotional incident in their childhood. In such instances, schema mode becomes activated in the form of a schema-related thought, feeling, and behavior pattern (Arntz and van Genderen 2020). In other words, when EMS is triggered, a series of coping mechanisms is initiated, and it leads to the activation of schema mode. Schema modes involve sudden emotions and behaviors (related to the situation), whereas EMSs represent a more permanent structure (e.g., personality).

EMSs may result in negative emotional reactions by becoming activated under stressful conditions and may trigger dysfunctional coping mechanisms such as avoidance, surrender, and overcompensation as a result (Young et al. 2003). These mechanisms cause schemas to maintain and deepen. Based on this, the aim in schema therapy is to enable individuals to function in a way that they can meet their basic emotional needs by acknowledging and transforming schemas and coping mechanisms. Visibility of modes in rapid mood swings encountered in certain cases, such as borderline personality disorders, can be predominantly frequent, and therefore, focus can shift to differentiating the modes and utilizing healthy modes consciously. However, schemas and modes in psychological treatment are examined simultaneously in the recent schema therapy (Young et al. 2003, Arntz and Jacob 2012, Bach et al. 2018).

In schema therapy, schemas developed in the early period are associated with psychopathology. For instance, borderline personality disorder is linked to abandonment schema (Young et al. 2003, Arntz and van Genderen 2020), while narcissistic personality disorder is characterized with schemas such as emotional deprivation and entitlement (Young et al. 2003, Bach et al. 2018). The treatment of psychological difficulties is achieved through a decrease in the intensity level of the schemas. Schema therapy is a

prominent therapy procedure in the treatment of borderline and narcissistic personality disorders (Assmann et al. 2024, Boog et al. 2024, Emmelkamp and Meyerbröker 2025).

Table 1. Schema domains and schemas (Young et al. 2003)

Schema Domain	Schema	Definition
Disconnection and Rejection	Abandonment/Instability	The belief that they will be abandoned by others
	Emotional Deprivation	The assumption that emotional needs are unlikely to be fulfilled
	Mistrust/Abuse	The belief that others will deceive or exploit
	Social Isolation/Alienation	The feeling of isolation and loneliness
	Defectiveness/Shame	The tendency to feel flawed and worthless, and being overly sensitive to criticism
Impaired Autonomy and Performance	Vulnerability to Harm or Illness	The tendency to catastrophize uncertain situations, leading to heightened anxiety
	Dependence/Incompetence	The belief that they are unable to cope with problems independently and experience a sense of helplessness
	Failure	The belief that they will never achieve success in life
	Enmeshment/Undeveloped self	An excessive dependence on their primary caregiver
Impaired Limits	Entitlement/Grandiosity	The perception of superiority to others and the belief that their actions or opinions are always justified
	Insufficient Self-control/Self-discipline	The difficulty postponing gratification and exhibition of challenges in adhering to rules
Other Directedness	Self-sacrifice	Prioritizing the needs of others and experiencing guilt when attending to their own needs
	Approval Seeking	Being overly concerned with gaining the approval and validation of others
	Subjugation	İnhibition of the expression of one's own needs due to fear of being abandoned or mistreated
Over Vigilance and Inhibition	Unrelenting Standards	Maintaining consistently high standards for themselves and engaging in self-criticism
	Emotional Inhibition	Dismissing one's own emotions as unimportant and suppressing them, while seeking to avoid the judgment of others
	Negativity/Pessimism	Constantly generating negative scenarios, feeling anxious, and fear of making mistakes
	Punitiveness	Being punitive toward both themselves and others, believing that mistakes must have consequences

According to Young et al.'s (2003) formulation, there are three fundamental stages of change in the practice of schema therapy. In the first stage, the concept of schema is introduced to the client. The client's childhood experiences are examined, and the effects of unmet emotional needs from childhood on the present are explored. The second stage is the change stage, where cognitive, experiential, and behavioral techniques are implemented. In the third stage, techniques that are developed to prevent the recurrence of the problems are practiced. Various techniques can be utilized in each stage. These include techniques such as imagery, schema cards, role-playing, chair work, and limited reparenting. Schema therapy, formed by the combination of behavioral model, dynamic psychotherapy, attachment theory, and Gestalt approach, focuses on changing 18 maladaptive schemas formed as a result of basic emotional needs that are not met in the early period and developing healthy coping mechanisms (Young et al. 2003).

Schema therapy is an effective method not only for personality disorders but also for clinical disorders such as depression, anxiety, obsessive-compulsive and related disorders, and trauma and stressor-related disorders (Taylor et al. 2017, Peeters et al. 2022). Studies conducted in the field of depression reveal that schema therapy reduces the symptoms significantly and results in robust recovery (Renner et al. 2016,

Stroian 2021, Kool et al. 2024). Schema therapy in anxiety disorders alleviates anxiety by reducing maladaptive coping mechanisms and improving individuals' functionality (Hawke and Provencher 2011). It presents an effective approach in restructuring the maladaptive schemas formed by traumatic experiences and reducing the symptoms in posttraumatic stress disorder (Masley et al. 2012, Verhaak and Ter Heide 2024). Furthermore, schema therapy in eating disorders reduces the intensity of the disorder by targeting maladaptive schemas shaped by past traumas (Simpson et al. 2010). In addition to alleviating the symptoms, schema therapy facilitates recovery in terms of interpersonal relations, emotional regulation, and functionality (Bamelis et al. 2014).

The review of literature highlights the limited number of studies conducted on the effectiveness of schema therapy in clinical disorders and the need for further research in this field (Nordahl et al. 2005, Cockram et al. 2010, Halvorsen et al. 2010, Hawke and Provencher 2011). Similarly, the fact that studies examining the effectiveness of schema therapy in psychological difficulties other than personality disorders are not compiled in the literature is striking. These issues reflect the gaps in the field of schema therapy in the literature. The purpose of the current study is to examine the effectiveness of schema therapy used in the treatment of clinical disorders by compiling published randomized controlled trials. Within this context, the current study aims to address the following question: Does the schema therapy approach have an effective power in the treatment of clinical disorders?

Method

The purpose of the present study is to compile the studies with randomized controlled trials examining the effectiveness of clinical disorders. In accordance with this purpose, studies conducted between 2014 and 2024, covering the 10 years, were reviewed on PubMed, ProQuest, Scopus, Web of Science, Google Scholar, PsychARTICLES and Wiley Online Library between June and December 2024.

The following inquiry index, in English, was used as a search strategy: "schema therapy" AND ("clinical disorders" OR "depression" OR "anxiety" OR "trauma" OR "OCD" OR "eating disorders"). Moreover, by examining reference lists, researchers also reviewed relevant studies that were not found in the databases. The criteria for the compilation include studies published in English, utilizing qualitative methods, adopting randomized controlled trials, and accommodating schema therapy interventions for clinical disorders. The reason for these criteria is to evaluate the effectiveness of schema therapy on clinical disorders in a systematic and robust manner, as well as adopting a methodologically strong perspective and obtaining reliable results by keeping the scope of the study homogeneous.

Studies that were not published in English and conducted prior to 2014, and did not include applications of schema therapy for clinical disorders, and did not utilize randomized controlled trials were excluded from the study. Furthermore, studies focusing on personality disorders were also excluded. The rationale for their exclusion is that the effectiveness in this field has already been examined comprehensively, and the present study aims to concentrate on clinical disorders.

Results

Selection of Studies

Studies examining the effectiveness of schema therapy on clinical disorders were reviewed in ProQuest (457), PsycARTICLES (14), PubMed (84), Wiley Online Library (95), Scopus (225), and Web of Science (257). Following the first review, recurring studies were identified and excluded. As a result, the number of records decreased to 934 from 1132. In line with the determined including and excluding criteria, abstracts of the articles were reviewed. Thus, excluding 873 studies, a search for full-text access for 61 studies was conducted.

Finally, it was determined that 9 out of 61 studies met the criteria. Included studies were prepared according to PRISMA 2020 Guidelines and shown in Figure 1 in the form of PRISMA flow chart (Page et al. 2021). Findings are presented in Table 2.

Table 2. Studies conducted in the last 10 years on schema therapy interventions for clinical disorders

Disorder	Ref.	Sample	Groups	Measure-Points	Group/ Indiv	Session	Measures	Main Findings	Treatment Quality	Numerical Data
Depression	Kopf-Beck et al. (2024)	292 Participants Diagnosed with Depression 162 Women 130 Men Age range: 18–75	1.CBT group (n = 101) 2.Schema therapy group (n = 95) 3.Supportive therapy group (n = 96)	Pre-test + Weekly measurements during the treatment process + Post-test + Follow-up (6 months and 24 months)	Individual & Group	28 Sessions 14 individual and 14 group sessions The duration of the sessions is not clearly specified.	Primary Outcome: Beck Depression Inventory (BDI-II) Secondary Outcomes: Montgomery-Åsberg Depression Rating Scale (MADRS) Munich-Composite International Diagnostic Interview (M-CIDI))	Schema therapy has been found to reduce levels of depression and provides a treatment option that is not clinically inferior to CBT, although it did not show superiority over supportive therapy.	Therapists were trained in both types of therapy and had demonstrated their competence. Therapy sessions were recorded, and their implementation was monitored through sessions evaluated by independent observers. Additionally, therapists' practices were regularly reviewed through supervision.	Effectiveness: During the treatment period, a significant and moderate reduction in depression levels was observed (d = -0.50). In the group receiving CBT, depression levels decreased more over time compared to supportive therapy; however, the effect size of this difference was small (d = -0.12). No significant or clinically meaningful difference in depression reduction over time was observed between schema therapy and supportive therapy (d = -0.01). Comparison with CBT: In the CBT group, an average reduction of 52.01% in depression symptoms was observed between pre- and post-treatment (95% Confidence Interval = −57.72 to −46.30). This corresponds to an absolute change of −16.49 points on the BDI-II. In the schema therapy group, an average reduction of 44.37% was observed (95% Confidence Interval = −51.67 to −37.08), corresponding to an absolute change of −14.13 points. Therefore, schema therapy was not inferior to

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Disorder	Ref.	Sample	Groups	Measure-Points	Group/ Indiv	Session	Measures	Main Findings	Treatment Quality	Numerical Data
										CBT in reducing depression. Remission: At the end of treatment (T7–final follow-up), 38% of clients (n = 79) achieved remission from depression according to a BDI-II score ≤ 12. However, the differences between schema therapy and supportive therapy, as well as between CBT and supportive therapy, did not significantly affect remission rates.
	Rek et al. (2023)*	193 Inpatients Diagnosed with Depression Gender: 93 women, 100 men Mean age: 42.9 years	1.CBT group 2.Schema therapy group	Pre-test + Post-test	Individual & Group	28 sessions 14 individual sessions and 14 group sessions Individual session duration: 50 minutes Group session duration: 100 minutes	Beck Depression Inventory-II (BDI-II) DSM-5 Personality Inventory–Short Form (DSM-5 PI-SF)	During the treatment, a general improvement in depressive symptoms was observed regardless of whether patients received schema therapy or CBT; however, it is emphasized that this change was not associated with maladaptive personality traits.	The therapists were trained and qualified in both schema therapy and CBT; the treatment protocol was followed, and recorded session videos were evaluated by two independent raters during the monthly supervision process.	The article did not report any numerical data regarding effect sizes.
	Jalali et al. (2019)	42 male inmates living with HIV in a prison in Iran Gender: 42 men Mean age: 31.78 ± 4.15 years	1.Schema-focused cognitive group therapy (n = 21) 2.Waitlist control group (n = 21)	Pre-test + Post-test	Group	11 Sessions 90 Minutes	Beck Depression Inventory (BDI-II). Schema Questionnaire-Short Form (SQ-SF)	In the experimental group, that is, inmates receiving schema-focused cognitive therapy, a reduction in depression was observed. There was a significant difference between the experimental group and the waitlist control group in terms of depression and maladaptive schemas.	The therapists were appropriately trained in schema therapy and the other intervention methods, and standard protocols were applied. The study did not provide direct information regarding supervision or monitoring of treatment fidelity.	Partial effect size for change in depression levels: $\eta^2_p = 0.58$ Partial effect size for change in maladaptive schema levels: $\eta^2_p = 0.45$

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Disorder	Ref.	Sample	Groups	Measure-Points	Group/ Indiv	Session	Measures	Main Findings	Treatment Quality	Numerical Data
Anxiety Disorder	Stefan et al. (2023)	112 Participants with a score above the cutoff point (30) on the Liebowitz Social Anxiety Scale 95 Women 17 Men Over 18 years old	1.Contextual Schema Therapy Group (n = 51) 2.Waitlist Control Group (n = 51)	Pre-test + Post-test + Follow-up (2 weeks)	Group	1 Session (Online) 150 Minutes	Liebowitz Social Anxiety Scale (LSAS) Fear of Negative Evaluation Scale - Short Form (FNE-SF) Acceptance and Action Questionnaire - Second Version (AAQ-II)	In the experimental group, significant decreases in fear of negative evaluation and experiential avoidance were observed up to the follow-up stage. Experiential avoidance became a marginal mediating factor. At the follow-up stage, the difference became significant in favor of the experimental group.	The intervention was delivered by four graduate students who had received 16 hours of group training and schema therapy training. Challenges encountered by the therapists were addressed, and adherence to the intervention protocol was evaluated.	Fear of Negative Evaluation: A One-Way Analysis of Covariance (ANCOVA), controlling for pre-intervention scores as covariates, showed a marginally significant difference between the groups after the intervention, $F(1, 101) = 3.77$, $p = 0.055$. At the follow-up stage, the difference between the groups was found to be statistically significant, $F(1, 101) = 7.26$, $p = 0.008$. The scores of the experimental group ($M = 40.50$, $SE = 0.83$) were lower than those of the control group ($M = 43.65$, $SE = 0.79$), and this difference had a medium effect size (Cohen's $d = 0.35$). The difference from pre-test to post-test was significant, $t(47) = 3.11$, $p = 0.003$, but no significant difference was found between post-test and follow-up, $t(49) = 1.59$, $p = 0.118$. Experiential Avoidance: The scores of the experimental group showed a decrease from pre-intervention to follow-up ($p < 0.001$) and from post-intervention to follow-up ($p = 0.041$). Compared to the control group, the experimental group showed lower

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Disorder	Ref.	Sample	Groups	Measure-Points	Group/ Indiv	Session	Measures	Main Findings	Treatment Quality	Numerical Data
										experiential avoidance scores (M = 37.85, SE = 1.32 vs. M = 42.11, SE = 1.29), and this difference had an effect size of d = 0.47, which was statistically significant (p = 0.023).
	Balje et al. (2024)	154 participants with Social Anxiety Disorder (SAD) and Avoidant Personality Disorder (APD) 80 Women 74 Men Age range: 18–65	1.CBT group (n=79) 2.Schema Therapy group (n=75)	Pre-test + Interim assessments (Week 15) + Post-test + Follow-up: 3(T0)-6(T3)-12(T5) months	Group	30 Sessions Once a week 90 Minutes	Liebowitz Social Anxiety Scale (LSAS) Avoidant Personality Disorder Severity Index (APDSI) DSM-III-R Structured Clinical Interview, Personality Disorders Form (SCID-II) Mini International Neuropsychiatric Interview (MINI) Inventory of Depressive Symptomatology (IDS) World Health Organization Quality of Life Assessment – Short Form (WHOQOL-BREF)	Group schema therapy and CBT both led to improvements over time in symptoms assessed by LSAS and APDSI; however, no significant differences were observed between the treatments at the 3 month and 1 year follow-up. Both methods were found to be effective on depressive symptoms and quality of life, but the number of clients completing the group schema therapy was noticeably higher.	Audio recordings were examined to evaluate adherence to treatment protocols and therapist competence. Approximately 20% of the 84 randomly selected sessions (about 2 out of every 10) were analyzed. These analyses were carried out by independent evaluators who were blind to the treatment outcomes, ensuring objectivity.	In the intention-to-treat sample, a large reduction in SAD symptom scores was observed in the group-format CBT condition between T0 and T5 (d^W = 1.50, 95% GA [1.2, 1.8]), while the group-format ST condition showed a similarly significant but smaller effect (d^W = 1.14, 95% GA [0.9, 1.4]). For maladaptive coping styles (APD) scores, the effect size was d^W = 1.10 (95% GA [0.8, 1.4]) in the group-format CBT condition, and d^W = 0.82 (95% GA [0.6, 1.1]) in the group-format ST condition. In the per-protocol sample, the effect sizes on SAD symptoms were higher: d^W = 2.00 (95% GA [1.3, 2.7]) in the group-format CBT condition and d^W = 1.30 (95% GA [0.9, 1.7]) in the ST condition. For maladaptive coping styles, the effect sizes were d^W = 1.10 (95% GA [0.6, 1.6]) in the group format CBT condition and d^W = 0.82 (95% GA [0.5, 1.2]) in the ST condition.

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Disorder	Ref.	Sample	Groups	Measure-Points	Group/ Indiv	Session	Measures	Main Findings	Treatment Quality	Numerical Data
	Mohammadi and Moradi (2016)	30 participants 18 Women 12 Men	Schema Therapy group (n = 10) Neuro-Linguistic Programming group (n = 10) Control group (n = 10)	Pre-test + Post-test	Group	Schema Therapy 10 sessions 90 minutes — Neuro-Linguistic Programming Group 8 sessions 90 minutes	Generalized Anxiety Disorder Scale (GAD-7)	Anxiety scores in the schema therapy and neuro-linguistic programming groups were found to be significantly lower compared to the control group. However, no significant difference was observed between the two experimental groups.	The study did not provide any specific information regarding protocol adherence or the monitoring of therapist competence.	56% of the variance in post-test changes in general anxiety and performance levels was attributable to the effect of the therapeutic interventions. Both schema therapy and neuro-linguistic programming (NLP) approaches were effective in reducing anxiety; however, neither was found to be more effective than the other.
PTSD	Lian et al. (2024)	30 Participants 30 Women Age range: 18-35	1. Schema therapy group (n=15) 2.Trauma Focused CBT group (n=15)	Pre-test + Post-test and Follow-up (3 months)	Group	16 Sessions Once a week 1 hour	DSM-5 PTSD Checklist Semi-structured Interview Questions	Both quantitative and qualitative analyses demonstrated that schema therapy was superior to the trauma focused CBT group in terms of short-term and long-term efficacy in reducing PTSD symptoms.	Although the procedures and implementation process of the interventions used in the study were described in detail, no specific explanation was provided regarding systematic observations or validation methods employed to ensure the fidelity and consistency of the therapeutic interventions.	In the group receiving schema therapy, a significant change in PTSD symptoms was observed over time, $\chi^2(2) = 23.33$, $p < 0.001$. According to the Wilcoxon test results, a significant difference was found between the pre-test and post-test ($p = 0.001$), as well as between the pre-test and follow-up test ($p < 0.001$). No significant difference was detected between the post-test and follow-up test. The significance findings above demonstrated similar trends for the trauma focused CBT group. The pre-post test change scores in PTSD symptoms showed a significant difference between the schema therapy and trauma focused CBT groups ($U = 184,50$, $z = 3,47$, $p < 0,001$). The median change

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Disorder	Ref.	Sample	Groups	Measure-Points	Group/ Indiv	Session	Measures	Main Findings	Treatment Quality	Numerical Data
										was 41.00 in the schema therapy group and 18.50 in the trauma focused CBT group. The mean ranks of change scores were 20.30 and 9.32, respectively.
Feeding and Eating Disorder.	McIntosh et al. (2016)	112 participants diagnosed with binge eating disorder according to DSM-IV. 112 Women Age range: 16-65	1.CBT group (n=38) 2. Appetite-focused CBT group (n=36) 3.Schema therapy group (n=38)	Pre-test + Interim assessments (Week 4, 8, and 26) + Post- test + 12-month Follow-up	Group	Weekly sessions during the first 6 months + monthly sessions during the second 6 months (a total of 30 sessions) The duration of the sessions was not clearly reported.	The Eating Disorder Examination-12 (EDE-12) The Eating Disorder Inventory -2 (EDI-2) The Structured Clinical Interview for DSM-IV (SCID) The Symptom Checklist-90-Revised (SCL-90-R)	No difference was found among the three therapy groups in terms of primary and secondary outcomes. A large improvement effect was observed in binge eating, other eating disorder symptoms, and overall functioning across all groups.	After receiving adequate training for all three treatment models (CBT, schema therapy, and appetite-focused CBT), the therapists were evaluated through training case applications and supervision processes prior to initiating therapy. In addition, weekly supervision was provided during the therapies, sessions were monitored via audio recordings, and the fidelity of each therapy to its specific model was assessed.	A large effect size (d = 1.06) was found for the primary outcome variable, binge eating frequency, when examining the change from pre-treatment to post-treatment. Furthermore, large effect sizes were also observed for most secondary outcome variables, including the EDE-12 subscales (ranging from d = 0.99 to d = 1.29), EDI-2 Bulimia subscale (d = ,,23) and SCL-90 global severity (d = 2.06). A moderate effect size was found for the EDI-2 Drive for Thinness variable (d = 0.52), while small effect sizes were observed for EDI-2 Body Dissatisfaction (d = 0.35) and vomiting frequency (d = 0.32). In terms of change from pre-treatment to post-treatment, no differences were found among the three therapy groups regarding binge eating frequency, F(2,110) = 0.20, p = 0.82, d = 0.14.

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Disorder	Ref.	Sample	Groups	Measure-Points	Group/ Indiv	Session	Measures	Main Findings	Treatment Quality	Numerical Data
OCD	Sij et al. (2018)	32 participants diagnosed with OCD who applied to psychology clinics %61,3 Women %38,7 Men Mean age: 29,5 – 36,5 years	1.Schema therapy group (n=15) 2. Control group (n=16)	Pre-test + Post-test	Group	Schema therapy 20 Sessions 120 Minutes	Young Schema Questionnaire Yale-Brown Obsessive-Compulsive Scale	It was observed that, compared to the control group, the intervention group showed that a significant reduction in emotional deprivation and emotional inhibition schemas, as well as in obsessive compulsive symptoms levels.	No explicit information was provided concerning the therapeutic nature of the intervention in the study.	The article did not report any numerical data regarding effect sizes.

CBT= Cognitive Behavioral Therapy, ST= Schema Therapy, DSM = Diagnostic and Statistical Manual of Mental Disorders, SCID = Structured Clinical Interview for DSMs, MINI = Mini International Neuropsychiatric Interview; PTSD: Posttraumatic Stress and Related Disorders; OCD: Obsessice Compulsive and Related Disorders; Ref: References
*Data obtained from the Kopf-Beck et al. (2024) were used

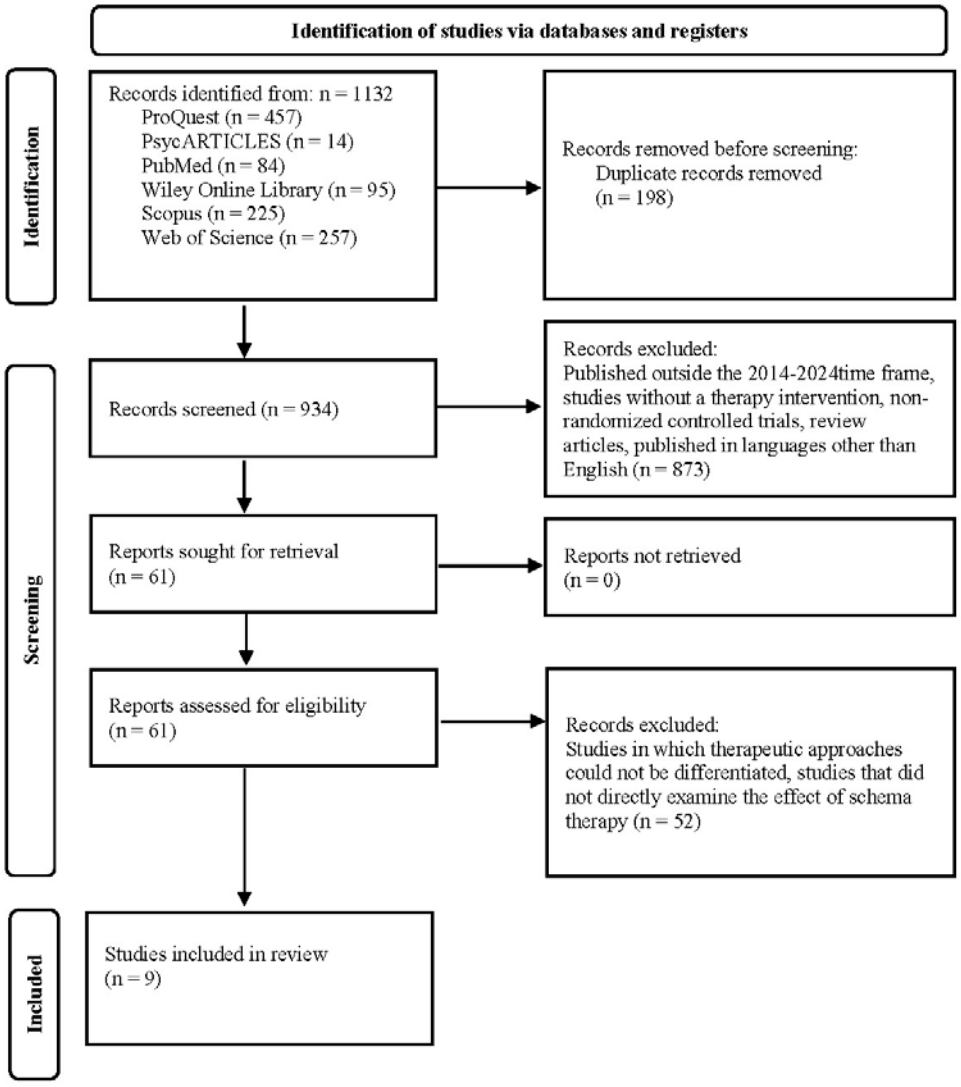

Figure 1. PRISMA flow chart

Characteristics of the Studies

Within the scope of this systematic compilation, nine studies published during the period between 2016 and 2024 and focusing on the effectiveness of schema therapy on clinical disorders were examined. Studies address the categories of depression disorders (Jalali et al. 2019, Rek et al. 2023, Kopf-Beck et al. 2024), anxiety disorders (Mohammadi and Moradi 2016, Stefan et al. 2023, Balje et al. 2024), PTSD (Lian et al. 2024), eating disorders (McIntosh et al. 2016), and OCD (Sij et al. 2018).

Research designs in the studies were randomized controlled trial-based models. Treatments were applied mostly in groups or individually, and the number of sessions generally varies from 10 to 30. It is determined that information regarding the severity of clinical disorders, comorbidity, and the supervision of therapies showed variability across the studies. It is noted in all studies that therapists received schema therapy training, and fidelity was supervised through supervision or independent observations.

Characteristics of the Participants

Sample sizes across the studies vary from 30 to 292. The total sample size of the included studies is 997 participants. The age range varies from 16 to 75. Samples consist of individuals receiving treatment in clinical settings (e.g., cases diagnosed with depression or social anxiety) as well as special populations (e.g., prisoners, HIV positive individuals). Samples in the studies consist of participants from different countries such as Germany, Malaysia, Iran, the Netherlands, New Zealand, and Romania.

Characteristics of the Procedures

Schema therapy was usually conducted within the framework of protocols, and the fidelity of the therapists was ensured through regular supervision, video recording, or supervision of independent assessors. In terms of treatment format, group therapies were particularly preferred in participants diagnosed with social anxiety, eating disorders, and prisoner samples, whereas individual or mixed (group + individual) formats were commonly used in depression and PTSD studies.

There were differences in the number of sessions in the studies examined. Kopf-Beck et al. (2024) and Rek et al. (2023) both carried out 28-session interventions; however, the study by Kopf-Beck et al. (2024) did not specify the session durations in their study, while Rek et al. (2023) reported session durations as 50 minutes for individual therapies and 100 minutes for group therapies. Jalali et al. (2019) applied 11 sessions of 90-minute interventions, while Stefan et al. (2023) conducted a single online session (2.5 hours). Baljé et al. (2024) held 30 weekly sessions (90 minutes) in their studies. Mohammadi and Moradi (2016) conducted schema therapy in 10 sessions (90 minutes). Lian et al. (2024) planned 16 series of 60-minute sessions on a weekly basis, and McIntosh et al. (2016) implemented 30 sessions in total, held weekly in the first 6 months and monthly in the second 6 months. Sij et al. (2018) conducted a schema therapy program consisting of 20 sessions of 120 minutes.

Measurement Tools

All of the studies employed measurement tools with high validity on clinical and diagnostic levels. Beck Depression Inventory-II (BDI-II) and Montgomery–Åsberg Depression Rating Scale (MADRS) were utilized in the evaluation of depressive symptoms. Liebowitz Social Anxiety Scale (LSAS-SR) and Generalized Anxiety Disorder Scale (GAD-7) were adopted in studies examining anxiety disorders. Eating Disorder Examination-12 (EDE-12) and Eating Disorder Inventory-2 (EDI-2) were used as main measurement tools for studies on eating disorders, while DSM-5 PTSD Checklist (PCL-5) for PTSD-focused studies and Yale Brown Obsessive Compulsive Scale (Y-BOCS) for OCD were utilized.

Young Schema Scale was used in measuring the effectiveness of schema therapy. Furthermore, diagnostic interviews such as SCID and MINI were also adopted. Brief Fear of Negative Evaluation Scale, Acceptance and Action Questionnaire (Version 2), and the Personality Inventory for DSM-5 Brief Form were also used.

Effectiveness of the Treatment

Depression

It is observed that schema therapy relieved the symptoms not only in individual but also in group therapies; however, its superiority could not be demonstrated in certain studies compared to CBT (Jalali et al. 2019, Rek et al. 2023, Kopf-Beck et al. 2024).

Anxiety Disorders

It is reported that the majority of the studies conducted on anxiety disorders were performed in a group setting and in a varying number of sessions. It is also stated that schema therapy achieved improvement in anxiety symptoms, but when compared to CBT, evidence showing a clear superiority remained limited (Mohammadi and Moradi 2016, Stefan et al. 2023, Baljé et al. 2024).

PTSD

The only study for PTSD found in the literature reports that schema therapy yielded more powerful and sustainable improvement in the short and medium term compared to trauma-focused CBT (Lian et al. 2024).

Eating Disorders

Limited evidence based on the findings of the single study in the literature shows that schema therapy has a similar level of effectiveness to CBT, with clear superiority (McIntosh et al. 2016).

OCD

Although schema therapy is reported to reduce the symptoms in OCD related studies, findings of the study should be generalized with caution since it is the only study in the literature, and it had a lack of application and methodological details (Sij et al. 2018).

Overall Evaluation

When the findings are evaluated as a whole, it is observed that although the intervention methods compared with schema therapy (e.g., CBT, Neurolinguistic Programming, supportive therapy) vary, CBT is most commonly selected. For instance, schema therapy and CBT were compared in the studies conducted in the field of depression, social anxiety, eating disorders, and PTSD. CBT and schema therapy yielded similar results for depression, social anxiety, and eating disorders; however, schema therapy provided better results in PTSD compared to CBT. Regardless of the variety of methods utilized, it is observed that the level of improvement in groups receiving schema therapy was higher than those who did not receive any intervention, but no significant difference was observed compared to those who received other intervention methods. In addition to the psychological symptoms, improvements in early maladaptive schemas and emotional strains were reported in the group receiving therapy compared to the group that did not. Taking the abovementioned findings into account, it can be evaluated that schema therapy, prominent in studies conducted on personal traits, can reduce other psychological difficulties at the level of clinical disorders in addition to its impact on personality traits. As a result, the present findings suggest that schema therapy is a promising option for clinical disorders. The effectiveness of schema therapy on depression, anxiety, and eating disorders was usually found to be equivalent to CBT, whereas it can be superior for PTSD and inconclusive for OCD due to the quality of the published study. It is understood that there is a need for methodologically consistent randomized controlled trials given the gap in findings regarding the effectiveness of schema therapy on clinical disorders other than depression and anxiety.

Discussion

The aim of the present study is to compile the studies examining the effectiveness of schema therapy on clinical disorders. A literature review was conducted incorporating the articles published between 2014

and 2024. In light of the findings, schema therapy can be considered an effective therapeutic intervention in clinical disorders. The current compilation included the studies that had an intervention and a control group, and the studies in which participants were randomly assigned to the groups. Nine empirical studies evaluated within the scope of the research were categorized according to the clinical disorders in which the effectiveness of schema therapy was investigated. In this regard, psychological disorders, which meet the inclusion criteria, such as depression, anxiety disorders, PTSD, eating disorders, and OCD were addressed. Although the limited number of studies meeting the inclusion criteria is noteworthy, the fact that empirical studies of this nature mostly concentrate on depression and anxiety disorders can be considered a part of the general conclusions.

Studies on depression and anxiety disorders reveal that schema therapy promoted significant improvements in symptoms. In depression studies, schema therapy is reported to have comparable effectiveness when compared to CBT (Carter et al. 2013, Stroian 2021, Bär et al. 2023). In anxiety disorders, the effect of group setting on improving commitment to the therapy and completion rates supports the applicability of schema therapy (Baljé et al. 2024).

The study by Karbasdehi and their colleagues (2018), which could not be included in the table but the results of which are believed to contribute to the knowledge base in the field, investigates the impacts of schema therapy rehabilitation on the cognitive emotion regulation and existential anxiety in patients with congestive heart failure. Patients in the experimental group received 10 sessions of schema therapy, and results showed a significant increase in emotion regulation strategies and a decrease in maladaptive strategies and existential anxiety. Schema therapy improved cognitive emotion regulation by increasing emotional awareness and supporting the change in maladaptive coping strategies. Furthermore, a decrease in existential anxiety had a positive impact on the quality of life of patients with congestive heart failure. This finding suggests that schema therapy can also be used in psychological symptoms accompanied by physical discomfort. The study by Renner et al. (2016) examines the effectiveness of individual schema therapy in the treatment of chronic depression by using a multiple single-case design. Findings regarding schema therapy conducted with 25 clients demonstrate that implementation reduced depression symptoms significantly, and it showed that 40% of response, 35% of remission, and 67% of recovery were achieved subsequent to the therapy. With the publication of studies of this nature, it is believed that schema therapy can be recognized as an evidence-based practice in the treatment of depression in the following years.

In the field of PTSD, the only study with randomized controlled trials meeting the criteria indicates that schema therapy leads to greater improvement in the short and medium term compared to trauma-focused CBT. This reveals schema therapy's potential to create permanent changes by targeting emotional and relational patterns (Lian et al. 2024). It offers long-term efficacy by not only alleviating the signs of trauma but also achieving emotional recovery. Schema therapy's focus on emotional needs, such as trust, abandonment, and control by targeting individuals' schemas can explain the reason why it yields long-lasting changes. Schema therapy may create more permanent changes by reconstructing emotional and relational patterns through imagery rescripting, while trauma-focused CBT intends to produce change on a cognitive level. Qualitative and quantitative analysis acquired in the study demonstrates that this comprehensive approach achieves more powerful and sustainable recovery in individuals with PTSD (Lian et al. 2024). Furthermore, studies by Cockram et al. (2010) and Peeters et al. (2022), which could not be included as they fail to meet the study criteria, examine the role of EDMs in PTSD development and the effectiveness of schema-focused therapy. Although the absence of randomized controlled trials and a control group limits the capacity of the results to evaluate the cause-and-effect relationship, schema therapy was indicated to achieve a significant improvement in EDMs and in the symptoms of PTSD. Furthermore, compared to manualized CBT, schema therapy was found to have greater improvement on PTSD and anxiety symptoms (Cockram et al. 2010, Peeters et al. 2022). It is understood that schema therapy is a highly promising approach for trauma-focused symptoms, although only one empirical PTSD study meeting the inclusion criteria was found.

Drawing on the study examining the effectiveness of schema therapy on eating disorders (McIntosh et al. 2016), schema therapy and appetite-focused CBT were found to be appropriate alternatives to traditional

CBT in the treatment of binge eating disorders. Appetite-focused CBT aims to regulate eating behaviors, while schema therapy targets reshaping the underlying emotional and cognitive structures of eating disorders. However, the fact that both therapies exhibit a similar degree of efficiency in clinical applications compared to traditional CBT suggests that both can be alternatives in clinical settings. All three approaches produce similar results in behavioral symptoms such as binge eating. Moreover, it should be noted that each therapeutic approach can be customized in a more particular way to suit personal needs. In appetite-focused CBT the process is completed by developing strategies in order to regulate eating behavior. Schema therapy adds an experiential dimension by examining personal beliefs and schemas in depth. It suggests that schema therapy and appetite-focused CBT can have complementary roles by offering a perspective beyond traditional CBT. In this context, the evidence indicates that both therapeutic methods can provide flexibility in the treatment of eating disorders since they offer a broader range of options.

Examining the findings of OCD study, although schema therapy has the potential to reduce the symptoms, the duration of application and lack of methodological detail highlight the need for more research to acquire generalizable results (Sij et al. 2018). The systematic compilation by Peeters et al. (2022) addresses the potential benefits of schema therapy in the treatment of OCD, and findings indicate an improvement in symptoms and EDMs. As indicated by Podea et al. (2009), considering OCD is often caused by anxiety and seeking control, schema therapy's efficiency on OCD interventions can stem from the fact that this model focuses on change from a behavioral perspective by raising individuals' awareness regarding their emotional experiences and needs, resistant thoughts and behavior patterns, and by developing healthy coping strategies. Therefore, it can facilitate a healthier emotional structure approach in managing individuals' intrusive thoughts as a therapeutic approach. Schema therapy in the treatment of OCD is considered to be effective in transforming emotional responses, unlike other traditional approaches. Due to the limited research in this field, there is a need for further studies examining how it operates in OCD samples on a broader scale and in which subgroups (e.g., cleaning, control) it can be more effective. The study by Thiel et al. (2016), which could not be included in the table as it fails to meet the study criteria, evaluates the effectiveness of exposure and response prevention therapy supported by schema therapy on individuals with OCD diagnosis. The study was conducted in a small sample without randomized controlled trials. In addition, it is observed that schema therapy reduced OCD symptoms significantly and yielded positive results on clients with treatment-resistant behaviors. Thereby, in the light of a limited number of studies, it can be seen as a potentially effective approach in the treatment of OCD.

When the findings acquired from nine empirical studies are examined holistically, the effectiveness of schema therapy on clinical disorders is observed to be comparable to other therapy approaches. However, it is emphasized that it is more effective compared to control groups. It is a remarkable finding that similar results were obtained as other approaches. When the compiled studies are examined, it is found that more than half of the studies compared schema therapy with CBT. Following the therapy processes administered for depression, social anxiety, and eating disorders, schema therapy is found to have similar levels of improvement as CBT. Achieving similar results as an evidence-based therapy approach, also referred to as "golden standard" in the literature, highlights how promising schema therapy is. Furthermore, the fact that schema therapy, which is expected to produce results over a longer period of time compared to a short-term therapy approach such as CBT, demonstrates similar results in even short-term findings is considered to be a highly significant finding. In the PTSD study, it was found to be more effective in reducing the symptoms in comparison with CBT. However, the findings in this study should be interpreted carefully due to the absence of information regarding the therapy processes.

The main purpose of schema therapy is to present the relationship between EDMs and modes and psychological symptoms and to treat psychological disorders by reducing the level of schemas and dysfunctional modes (Taylor et al. 2017). For instance, it was found that individuals diagnosed with depression had more schema points in all schemas compared to the control group without a depression diagnosis (Bär et al. 2023), although emotional deprivation and social isolation schemas are known to be prominent in depression. It was seen that in panic disorders, vulnerability and obedience schemas are more visible (Bär et al. 2023). These schemas are addressed in the schema therapy process, and therefore,

they contribute to the treatment of psychological disorders. When the study findings presented in the table are analyzed, it can be seen that schema therapy reduces the symptoms of various psychological disorders. Similar results acquired in different psychological disorders in the findings suggest that working on schemas and modes forms a common mechanism in treatment.

In general, the effectiveness of schema therapy on different disorders varies, and it can be considered as equivalent to CBT in depression and anxiety disorders, superior to CBT in PTSD, and an area that requires further evidence in eating disorders and OCD. Furthermore, structures of the sessions, therapist competence, long-term follow-up, and methodology standards are necessary to evaluate the effectiveness of schema therapy more reliably. In this context, schema therapy is a promising method in the treatment of clinical disorders; however, it is clear that there is a need for studies with a higher sample size, methodologically consistent and randomized controlled trials with long-term follow-up in order to strengthen its effectiveness, clarify the comparison among the clinical disorders, and produce generalizable results.

In this study, articles examining the effectiveness of schema therapy on clinical disorders are compiled; however, studies included in the compilation have significant limitations in terms of methodology and scope. Certain studies have several characteristics hindering the interpretation of the clinical findings. For instance, clinical disorders and personality difficulties often co-occur (Wang et al. 2021), and schema therapy is often used in a group with personality disorders. Therefore, it remains unclear whether the level of improvement following schema therapy can be attributed to the decrease in clinical symptoms or to the improvement in personality pathology. As a study that reflects this methodological limitation, Baljé et al. (2024) examined social anxiety, the primary diagnosis, and accompanying avoidant personality disorder, and findings revealed that CBT and schema therapy demonstrated the same level of improvement in the severity of social anxiety and avoidant personality disorder; however, the number of clients completing the schema therapy was higher. The common methodological challenge in this and such studies is that it remains unclear whether the improvement stems from the decrease in clinical symptoms or the changes at the personality level or both of them. On the other hand, it can be seen that the majority of the studies presented in the table were conducted in group settings. Considering that interventions in group settings have unique healing factors, such as social support resulting from coping with similar problems, to what extent the level of improvement can be differentiated from the effectiveness of the intervention method is another topic of discussion. Furthermore, sample sizes, duration of interventions, and therapist competency vary across the studies. For instance, the fact that the number of participants varied across the studies, from 30 to 292, some of the studies consisted of single sessions while others had up to thirty sessions, and fidelity was not consistently performed across the studies, limits the strength of the findings. In addition, the heterogeneous structures within the clinical disorders impose a limitation to generalizing the findings. For instance, as in the heterogenic structure commonly seen in OCD (Çapar-Taşkesen and İnözü 2024), there is a need for studies with samples that reflect the broad and heterogenic structure. Additionally, including studies only published in English and conducted within the last ten years in the compilation may have overlooked the clinically significant studies in different languages or studies published earlier, and this also can limit the methodological variety. Failure to assess methodological quality systematically across the studies emerges as a limitation as well. Especially the absence of tools such as the Cochrane Risk of Bias Tool or similar standard tools in examining the risk of bias necessitates careful interpretation of the findings. Using such tools in future studies will allow for identifying bias factors more systematically and increasing reliability. These limitations constrain the generalizability of the results and should be considered when interpreting the effectiveness of schema therapy.

Conclusion

Studies examined as part of this compilation support the effectiveness of schema therapy in clinical disorders. Schema therapy can be considered a promising alternative intervention method in disorders such as depression, anxiety disorders, eating disorders, PTSD, and OCD; however, certain limitations are observed in the current literature. There is a limited number of studies with randomized controlled trials examining the effectiveness of schema therapy in clinical disorders, and further research in this field has

the potential to contribute to the literature. There are valuable studies with a single case pattern, conducted without a control group, and effective therapy mechanisms by examining what causes the change in therapy. It is arguable whether this type of study reflects the current trend in literature. On the other hand, the limited number of studies with traditional randomized controlled trials in the last ten years may limit the recognition of schema therapy as an effective intervention method in the treatment of clinical disorders. The purpose of our article is to reveal the need for studies aiming at examining the effectiveness of one approach in a certain disorder through the use of randomized controlled trials in the field of schema therapy, rather than demonstrating the superiority of one approach over another.

In current studies, the limited number of sessions, differences in selecting the control group, and the absence of long-term follow-up are other notable limitations. The lack of comparability of interventions in different cultural contexts also limits the generalizability of the results. In this context, there is a need for new studies assessing the effectiveness of schema therapy in a more detailed and comprehensive way and for methodologically stronger studies taking the cultural settings into consideration and examining the long-term effects. It is believed that such studies will fill the gap in the literature, evaluate the effectiveness of schema therapy from a broader perspective, and provide a basis for obtaining reliable and generalizable results in clinical practices.

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