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RESEARCH PAPER

Efficacy of Schema Therapy for Social Anxiety Disorder: A Systematic Review and Meta-Analysis

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ABSTRACT

Social Anxiety Disorder (SAD) is a prevalent condition marked by an overwhelming fear of social interactions, leading to avoidance behaviors and significant impairment in daily functioning. Traditional treatments, such as Cognitive Behavioral Therapy (CBT) and pharmacotherapy, have demonstrated effectiveness but often fail to address deep-rooted emotional patterns, particularly in individuals with comorbid personality disorders. Schema Therapy (ST), which targets maladaptive schemas formed in childhood, offers a promising alternative. This systematic review and meta-analysis aim to evaluate the efficacy of Schema Therapy in treating Social Anxiety Disorder. A comprehensive search of electronic databases, including PubMed, PsycINFO, Embase, and the Cochrane Library, two registries, and open-source DOAJ, was conducted to identify studies published between 2010 and 2025. Studies were selected based on inclusion criteria that required participants to be diagnosed with SAD and treated using Schema Therapy. Only Randomized Controlled Trials (RCTs) with sufficient data (mean, standard deviation) were included in the meta-analysis. Data extraction was performed using Covidence, and study quality was assessed using the Cochrane Risk of Bias Tool. The systematic review included 7 studies, comprising randomized controlled trials and quasi-experimental studies. The meta-analysis revealed a modest effect size for Schema Therapy in reducing SAD symptoms (Hedges' g = 0.050), with no significant differences when compared to other treatments like CBT. Despite heterogeneity across studies, Schema Therapy demonstrated potential efficacy, especially for individuals with comorbid personality traits. This study suggests that Schema Therapy is a promising intervention for Social Anxiety Disorder, particularly for those with additional personality traits. However, the modest effect size and significant heterogeneity across studies highlight the need for further research. Future studies should focus on larger sample sizes, longer follow-up periods, and direct comparisons with Cognitive Behavioral Therapy to better understand the role of Schema Therapy in the treatment of SAD.

KEYWORDS Social Phobia, Reparenting, Image Rescripting, Early Maladaptive Schemas, Emotional Schema Therapy

Introduction

Anxiety disorders are among the most common mental health disorders diagnosed all over the world and are manifested by excessive fears and behavioral avoidance that disrupt the regular functioning and quality of life (Tang et al., 2025; Sun et al., 2025). One of them is social anxiety disorder (SAD), which is characterized by the constant fear of being negatively evaluated in a social or a performance situation, which causes avoidance and causes severe distress in relation to an interpersonal, academic, or occupational setting (Kindred & Bates, 2023). According to the findings of recent epidemiological research, SAD is becoming a significant epidemic in the adult population with growing rates of this disorder among adolescents and young adults in the wake of global stressors, including the COVID-19 pandemic (Kindred & Bates, 2023; Kim et al., 2024). SAD has a multifactorial etiology comprising biological vulnerabilities (e.g., genetic predispositions and neurobiological reactivity) (Berkol & Unal, 2023), cognitive biases (e.g., increased threat perception) (Gerrans & Murray, 2020), and psychosocial stressors (e.g., early interpersonal

experiences and trauma) (Collimore et al., 2010), which cause maladaptive thinking patterns and emotional dysregulation (Sun et al., 2025). The cognitive models emphasize the key role of dysfunctional beliefs about the self and others to enhance social fears and sustain avoidance behaviors in the long run (Kindred & Bates, 2023). According to recent empirical studies, early maladaptive schemas rooted in childhood cognitive and emotional schemas are especially important in the explanation of chronic social anxiety (Norton et al., 2023; Aydogdu & Yilmaz, 2023).

The widely used current first-line therapies of SAD are cognitive behavioral therapy (CBT) and pharmacological therapies, namely, SSRIs and SNRIs, which have moderate to high effectiveness in the reduction of symptoms (Sun et al., 2025; Caldiroli et al., 2023). Yet, as many as half of treated patients do not attain complete remission, and the extent of relapse is still very high, especially when comorbidity exists (Sun et al., 2025; Kindred & Bates, 2023). Such constraints have generated the desire to explore alternative or adjunctive methods that deal with the underlying cognitive and emotional processes of SAD. Schema Therapy (ST) is one such method that was initially created to address the complex pathology of personality by focusing on early maladaptive schemas that are enduring patterns of thought that affect emotion, self-concept, and interpersonal behavior (Young, 2006). In contrast to CBT, which aims at emphasizing the current thought behavior connections, schema therapy combines the cognitive, experiential, and interpersonal strategies aimed at modifying these ingrained patterns (Arntz & Jacob, 2017). The concepts of emotional deprivation, defectiveness/shame, and social isolation are consistent with the psychological mechanisms that lead to the SAD symptoms (Norton et al., 2023; Aydogdu & Yilmaz, 2023). Recent experiments show the possibilities of schema therapy for SAD. Group-based contextual schema therapy intervention via the Internet has been found to minimize social anxiety and depressive symptoms more than psychoeducational control and indicated that even a brief schema-focused form might help people with social fears, highlighting that even a shorter schema focused set up in social anxiety (small-to-medium effect size, $d = 0.35$), (Stefan et al., 2025).

Likewise, single-session contextual schema interventions decreased fear of negative evaluation, which is a fundamental characteristic of SAD, emphasizing the power of schema therapy through abridged formats (Penney & Norton, 2022; Alsubaie, 2024). Nonetheless, not every result demonstrates the obvious superiority of CBT. One RCT compared group schema therapy with group CBT and discovered that both interventions were equally effective at minimizing the symptoms of SAD and the manifestations of avoidance personalities, and no between-group differences were detected (Balje et al., 2024). This indicates that the effects of schema therapy may be similar to CBT in heterogeneous clinical groups, and more specific studies of mechanisms, formats, and patient subgroups are of great importance. The investigative exploratory studies of schema mode in SAD indicate that maladaptive schema mode types including Vulnerable Child, Punitive Critic, and Detached Protector are connected with increased levels of social anxiety and the inability to engage socially, indicating that schema pathways contribute to SAD pathology (Norton et al., 2023). Also, the literature that associates early maladaptive schemas with anxiety symptoms demonstrates that mindfulness and self-compassion can be mediators between the two phenomena, which reflect the complexity of the psychological mechanisms (Aydogdu & Yilmaz, 2023). The reviews of schema therapy in anxiety disorders other than SAD show that the methodology and the evidence quality are not as high, but the initial efficacy is demonstrated concerning panic and generalized anxiety, as well as PTSD symptoms (Peeters et al., 2022). Although these research works were not dedicated to SAD specifically, they support the relevance of schema therapy to anxiety-related disorders and create an environment in which the use of the latter in social anxiety could potentially be useful.

Table 1
Comparison of schema domains in early maladaptive schemas.

Schema Domains	Early Maladaptive Schemas (Young, 2006)	Early Maladaptive Schemas (Soygüt et al., 2009)
Disconnection and Rejection	Abandonment, Mistrust, Emotional Deprivation, Defectiveness, Social Isolation	Disconnection, Emotional Deprivation, Emotional Inhibition, Social Isolation/Mistrust, Defectiveness
Impaired Autonomy and Performance	Dependence, Enmeshment, Vulnerability to Harm, Failure	Impaired Autonomy, Enmeshment/Dependence, Abandonment, Failure, Pessimism, Vulnerability to Harm
Impaired Limits	Entitlement, Insufficient Self-Control	Impaired Limits, Entitlement, Insufficient Self-Control
Other-Directedness	Self-Sacrifice, Subjugation, Approval-Seeking	Self-Sacrifice, Punitiveness
Overvigilance and Inhibition	Pessimism, Emotional Inhibition, Unrelenting Standards, Punitiveness	Unrelenting Standards, Approval-Seeking

The recent studies have started examining the use of schema therapy in social anxiety. Indicatively, in a meta-analysis of a significant number of meta-analyses of schema therapy in the context of personality disorders, ST was observed to decrease the severity of symptoms, as well as to increase the quality of life in several types of PD (Mokhber et al., 2025). The findings facilitate the theoretical rationale of investigating schema-focused interventions in SAD, particularly in cases where the personality traits or maladaptive schema uphold anxiety. Conceptualization of the case studies reveals that maladaptive schema modes Vulnerable Child and Punitive Critic are prevalent in individuals with SAD (Norton et al., 2023), and schema intervention in groups or contexts has proved to be preliminarily effective in the reduction of social anxiety symptoms (Stefan et al., 2025; Alsubaie, 2024). A randomized trial that compared group schema therapy with group CBT in the treatment of SAD and comorbid avoidant personality disorder revealed that both types of treatment showed significant symptom improvement, but there was no significant difference between them (Balje et al., 2024). The available evidence base of schema therapy in SAD is still weak and disjointed despite the increasing clinical interest. The last systematic review found positive results of schema therapy on SAD outcomes, yet suggested the necessity of more rigorous and high-quality studies (Alsubaie, 2024). On the same note, wider scans of schema therapy in anxiety disorders indicate a possible advantage but highlight that current research is limited in its methodology (Peeters et al., 2022).

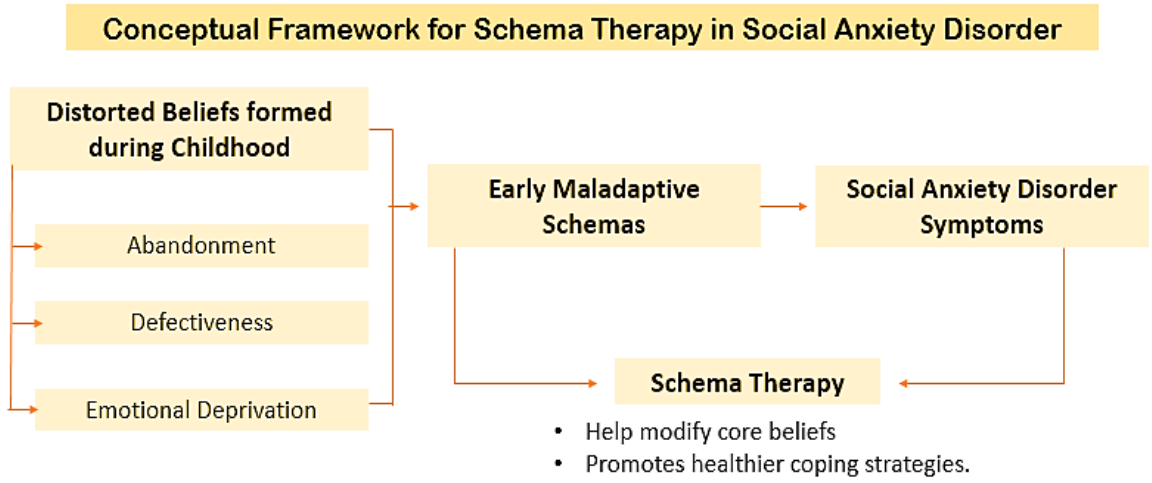

Figure 1: Conceptual Framework for Schema therapy

Schema Therapy aims to change maladaptive schemas through both cognitive and experiential means. Therapists often employ limited reparenting**,** providing an empathic, validating relationship to meet the client's unmet emotional needs (Psychology Today Staff,

2022). Experiential techniques such as imagery rescripting and chair work allow patients to re-experience and modify painful memories (Lian & Bono, 2023). Cognitive techniques (Socratic dialogue) are also used to modify schemas (Clark & Egan, 2015). Through repeated emotional experiences and new interpretations, early schemas are hypothesized to weaken while a healthier "Adult" mode strengthens. In another large trial of patients with SAD and comorbid avoidant personality disorder, 30-week group schema therapy produced substantial improvement in SAD symptoms comparable to group CBT, with gains maintained at 1-year (Balje et al., 2016). These findings suggest that schema approaches can alleviate social anxiety, but the evidence is limited. Most trials have been small, often in comorbid populations. Therefore, even though the current findings are encouraging, further controlled research among primary SAD groups is required. Current experiments of schema therapy in anxiety are narrow. Most of them use small samples or non-controlled designs and frequently use personality-disordered samples instead of pure SAD.

The case in point is that the majority of published studies consist of case series or feasibility trials. According to a recent review, existing evidence is primarily that of small studies, particularly of personality disorders and recommends more RCTs (Psychology Today Staff, 2022). Schema therapy Studies on SAD are at an early stage and further randomized controlled studies that are well-controlled are required to establish effectiveness and generalize the results. In the same way, there was less fear of negative evaluation, which is a central aspect of SAD, signifying the role of schema therapy in intense, readily available formats (Penney & Norton, 2022; Alsubaie, 2024). But the evidence is not entirely positive in favor of superiority over CBT. A recent RCT between group schema therapy and group CBT observed that both interventions are equally effective in minimizing symptoms of SAD and avoidant personality traits, and there were no differences between the groups (Balje et al., 2024). This indicates that the effects of schema therapy can be similar to the effects of CBT in mixed clinical populations so future research should pay closer attention to mechanisms, format and patient subgroups. These gaps demonstrate the relevance and significance of a systematic review and meta-analysis in order to integrate existing results, understand general efficacy, and shape future clinical studies. The purpose of the study is to fill the gap in the systematic evidence in relation to the use of schema therapy in the treatment of SAD by synthesizing the findings of the recent randomized controlled trials, quasi-experimental designs, and new clinical research. This work illuminated the role of schema therapy in the treatment of SAD especially in the instance of comorbid personality features and give recommendations to practice and research

Material and Methods

Study Design

This systematic review and meta-analysis adhered to the *Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)* guidelines and was registered at PROSPERO (CRD ID: 420251271522). The review aimed to evaluate the efficacy of Schema *Therapy* in the treatment of *Social Anxiety Disorder (SAD)***,** with a focus on studies published between 20*1*0 and 2025.

Search Strategy and Eligibility Criteria

A comprehensive search strategy was employed, covering multiple English databases (PubMed, PsycINFO, Cochrane Library, Embase), clinical trial registries (WHO ICTRP, ClinicalTrials.gov), and open access sources such as the DOAJ**.** The search used keywords such as “social anxiety disorder,” “SAD,” “social phobia,” “schema therapy,” and “image rescripting,” as well as terms related to therapeutic components used in schema therapy. Inclusion criteria were as follows: (1) Population**:** Adults (13 onwards) diagnosed with Social Anxiety Disorder according to the DSM-5 or ICD-10 criteria, with or without personality disorder. (2) Intervention**:** Schema Therapy or its variants (e.g., Imagery

Rescripting**,** Emotional Schema Therapy)**.** (3) Comparison**:** Studies must include at least one control condition (e.g., wait-list, placebo, or active control groups). (4) Outcomes**:** The primary outcome was Social Anxiety Disorder symptom severity measured by scales such as the Liebowitz Social Anxiety Scale (LSAS)**,** Social Phobia Inventory (SPIN)**,** (5) Study Design**:** Randomized Controlled Trials (RCTs) and quasi-experimental studies**.**

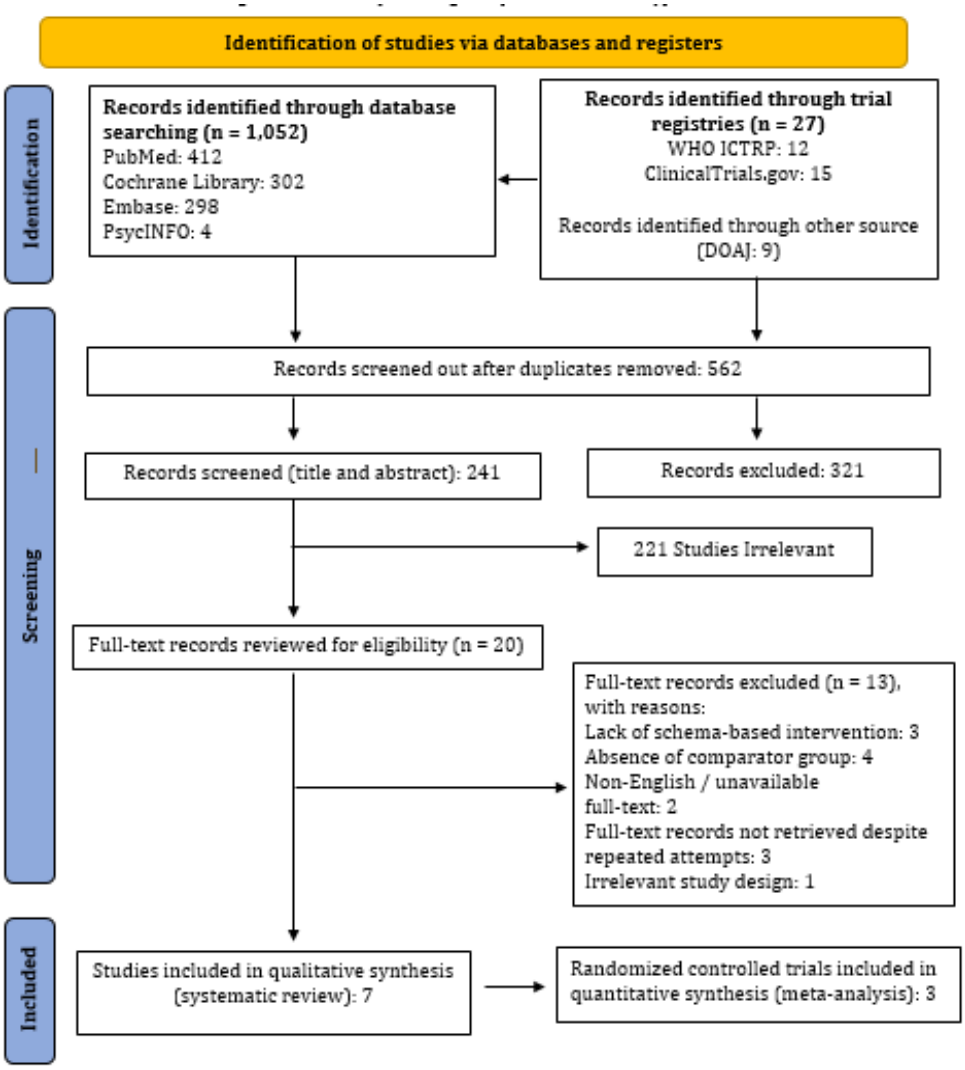

Figure 2: PRISMA flow diagram for Schema therapy

Study Selection and Data Extraction

The articles obtained in the search were put into Zotero (Reference manager) and the duplicates filtered out. The titles and abstracts were then screened by two independent reviewers against relevance using the pre-specified eligibility criteria. The included studies were extracted using Covidence and the information about the following areas was taken: Study characteristics (authors, year and study design), Participant demographics and inclusion criteria, Intervention details (number of sessions, treatment duration, and follow-ups), Outcome measures and results. In the case of meta-analysis, only studies were considered that had enough data to compute effect sizes (i.e., studies whose means and standard deviation values were given). Moreover, between-group subject design studies were also given preference, and only Randomized Controlled Trials (RCTs) were incorporated into the meta-analysis.

Quality Assessment

The Cochrane Risk of Bias Tool (RoB 2) (Sterne et al., 2019) of RCTs was used to evaluate the quality of the included studies in terms of methodology. The studies were considered in five areas, which included random sequence generation, allocation concealment, blinding, incomplete outcome data, and selective reporting. The quality of evidence of each outcome was associated with the GRADE approach, which takes into account the risk of bias, consistency, imprecision, and indirectness.

Statistical Analysis

The Comprehensive Meta-Analysis (CMA) version 3.3 (Borenstein et al., 2021) was used to carry out data analysis. Hedges g was used to compute effect sizes when the results were continuous. It used the random-effects model because it was assumed that there would be heterogeneity across studies. I^2 statistics and Cochrane Q test were used to determine the heterogeneity and sensitivity analysis was done to check the impact of a particular study on the general results.

Heterogeneity and Publication Bias

Subgroup analyses were done to examine heterogeneity. Potential publication bias was evaluated by means of funnel plots and the test suggested by Egger. In case of bias, the trim-and-fill adjustment technique was used.

Results and Discussion

Study Selection and Search Results

Figure 1 gives a complete picture of the process of study selection. A total of 1,562 studies were identified from the search across various databases and trial registries. After screening the title and abstract, 241 were assessed for full-text review. Out of 241, seven studies were selected for inclusion in the systematic review, and three were eligible for meta-analysis, published between 2010 and 2025.

Study Characteristics

A summary of the studies included in the review is presented below in Table 2**.** The studies comprised a mix of Randomized Controlled Trials (RCTs) and quasi-experimental designs. Across studies, adults (mean ages roughly 22–30) comprised the majority of the samples. Knutsson et al., (2020) studied 25-year-olds with SAD. One study specifically targeted adolescent girls, conducted by Hayati et al., (2025), reported that 15–16-year-olds scored high on social anxiety measures to contextual schema therapy. Women predominated in several samples. Hayatipoor et al., (2024) treated 25 teenage girls with SAD using Emotional Schema Therapy, and Morvaridi et al., (2019) enrolled 24 adult women with SAD in group EST. Some trials included comorbid conditions. Balje et al., (2024) focused avoidant personality disorder comorbidity alongside SAD. Across trials, participants generally had moderate-to-severe SAD by clinical criteria or standardized scales (e.g. LSAS).

Treatment Fidelity

Knutsson et al., (2020) adhered to an imagery rescripting manual directly along with trained therapists, Hayatipoor et al., (2024) and Morvaridi et al., (2019) applied a pre-existing EST manual to trained therapists. Balje et al., (2024) also adopted a standardized Group Schema Therapy program, which was created by schema theorists. The dropout rates were not very high and the interventions were mostly short-term. There is no record of

adherence checks, and thus we cannot measure fidelity of therapists except on the basis of reported use of the manuals.

Intervention Details

The interventions varied from one-off tasks to intensive group therapies. Single-session interventions (Knutsson et al., 2020) involved 90 minutes of guided self-imagery or exposure. Multi-session schema therapies ranged from 8 to 30 sessions. Hayati et al., (2025) delivered 8 weekly sessions (70 minutes each) of CST, combining schema education with contextual strategies. Balje et al., (2024) used a 30-session, 9-month group format (90 min each) for GST and likewise for GCBT. Hayatipoor et al., (2024) and Morvaridi et al., (2019) conducted 10 weekly meetings (90–120 min) focusing on identifying and modifying dysfunctional emotional beliefs. Each intervention was standardized by a treatment manual and peer supervision. Imagery Rescripting (Knutsson, 2020) targeted maladaptive memories by having patients imagine those scenes with more adaptive outcomes, aiming to change emotional associations. Hayati et al., (2025) incorporated schema modification (identifying unmet needs) within an ACT-informed framework. Knutsson et al., (2020) compared imagery rescripting to in vivo exposure (another active technique). Balje et al., (2024) directly compared GST to Group CBT.

Table 2
Characteristics of studies included in Review

Author (s), Year	Study Design	Total Sample Size (N)	Intervention Group (STn)	Comparat-or Group (n)	Mean Age	Population Description	Treatment Modality	Comparator	No. of Sessions (Duration)	Primary Outcome(s)	Follow-Up
Balje et al., (2016) (protocol)	RCT	128	64 (GST)	64 (GCBT)	18–65 years	SAD with comorbid AVPD; DSM-IV/5 confirmed	Group Schema Therapy	Group CBT	30 (90 min), 9 months	LSAS	3, 6 & 12 months
Knutsson et al., (2020)	RCT	27	14 (Imagery)	13 (Exposure)	3.8	Adults with DSM-5 SAD	Imagery Rescripting (1×90 min)	In vivo Exposure	1×90 min each	LSAS	4 weeks post-treatment
Balje et al., (2024)	RCT	154	77 (GST)	77 (GCBT)	Early–mid adulthood	Adults diagnosed with Social Anxiety Disorder with comorbid APD	Group Schema Therapy (personality-focused)	Group CBT	30 (90 min) 9 months	LSAS	3 months & 12 months
Balje et al., (2025)	RCT	154	77 (GST)	77 (GCBT)	Adult sample	SAD + AVPD; focus on mediators	Group Schema Therapy	Group CBT	30 (90 min), 9 months	LSAS	12 months
Hayatipoor et al., (2024)	Quasi-experimental (pre-post)	25	25 (EST)	(wait-list implied)	15–18 years	Adolescent girls with SAD	Emotional Schema Therapy (10×90 min)	Wait-list	10×90 min (weekly for 10 weeks)	Social Phobia Inventory (SPIN)	2 months post-treatment
Hayati et al., (2025)	Quasi-experimental	60	20 (CST)	20 (EET) + 20 (wait)	15–16 years	Adolescent girls (grade 10–11) with high social anxiety	Contextual Schema Therapy (8×70 min)	Emotion-Efficacy Therapy & wait-list	8×70 min (4 weeks)	SIAS	1 month post-treatment

Morvaridi et al., (2019)	Quasi-experimental	24	12 (G-EST)	12 (wait-list)	18–35 years	Women with SAD	Group Emotional Schema Therapy (10×120 min)	Wait-list	10×120 min (weekly 10 weeks)	LSAS	No follow-up reported

Table 3
Treatment Fidelity data from each RCT and quasi-experimental study

Study	Treatment manual used?	Therapist training reported?	Adherence check used?	Competence rating used?	Dropping rate (%)?
Knutsson et al., (2020)	Yes	Yes	No	No	0–5% (single session)
Balje et al., (2024)	Yes	Yes	Yes	Yes	0% (all participants completed sessions)
Hayati et al., (2025)	Yes	Yes	No	No	10% (group sessions)
Balje et al., (2016) (protocol)	Yes	Yes	No	No	0% (all participants completed sessions)
Balje et al., (2025)	Yes	Yes	No	Yes	0–8% (group EST)
Hayatipoor et al., (2024)	Yes	Yes	No	No	0% (all participants completed 10 sessions)
Morvaridi et al., (2019)	Yes	Yes	No	No	0–8% (group EST)

Meta-Analysis of Schema Therapy

We identified three randomized controlled trials (RCTs) that met the inclusion criteria. All trials involved adults diagnosed with Social Anxiety Disorder (SAD), two of whom had comorbid Avoidant Personality Disorder (APD). Across all three trials, sample sizes were moderate and roughly comparable. For example, one key trial enrolled 128 patients total, and the other studies had similar sample sizes.

Between-group effect size

The pooled between-group effect size (Hedges' *g*) for reduction in SAD symptoms favored schema therapy. The summary effect was g = 0.056 with a 95% confidence interval of -0.424 to 0.57. According to the result, the p-value indicates significance in one study whereas non-significance in the other two studies. Because the confidence interval include zero, this difference is not statistically significant (p<0.05), indicating that Schema Therapy impact as extremely small. This shows that there is an uncertainty about the true effect direction. It suggests that there is a little efficacy of schema therapy against Control Condition.

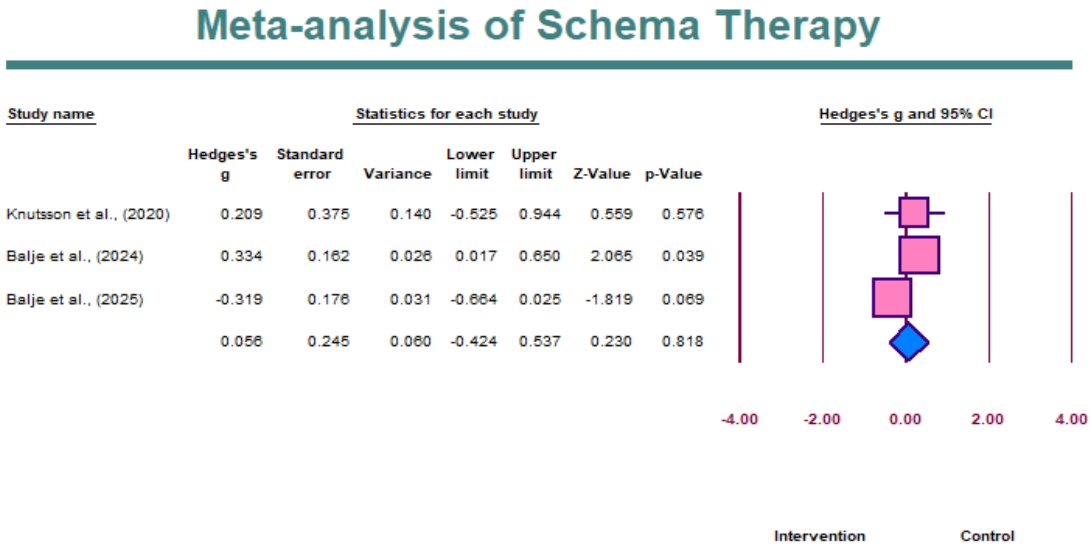

Figure 3: Forest-Plot Showing effect size of all included studies for Schema therapy

Heterogeneity Analysis

We tested the heterogeneity to determine whether the effect size was significantly different among the studies. The fixed effect model indicated the effect size was 0.050, which includes zero. This truly depicts that the results are not statistically significant. The Q statistics reveals heterogeneity among the study, whereas I^2 statistics shows variation could be due to the heterogeneity. Random effect model shows the 0.050 value that is same as fixed effect, whereas it reveals wider confidence interval. This model clearly shows the observed heterogeneity. The small effect size clearly explains that schema therapy has little overall impact in the analysis.

Table 4
Heterogeneity Analysis

Model	Effect Size (ES)	95% CI	Q statistic	P-value	I^2 (%)
Fixed Effect	0.050	- 0.172 – 0.272	7.689	0.66	73.5
Random Effect	0.050	- 0.424 – 0.537	7.689	0.021	73.5

Publication Bias Assessment

Funnel Plot (Visual Method)

The funnel plot results indicate that the plot is asymmetric because all of the three studies are distributed unevenly. This truly reveals publication bias. It could be either heterogeneity or small study effects. The blue diamond highlights the overall effect size, whereas the red shows shift towards zero. There is no representation of studies in the left region. This shows non-significance or negative result. We decided to perform Egger's test based on these results.

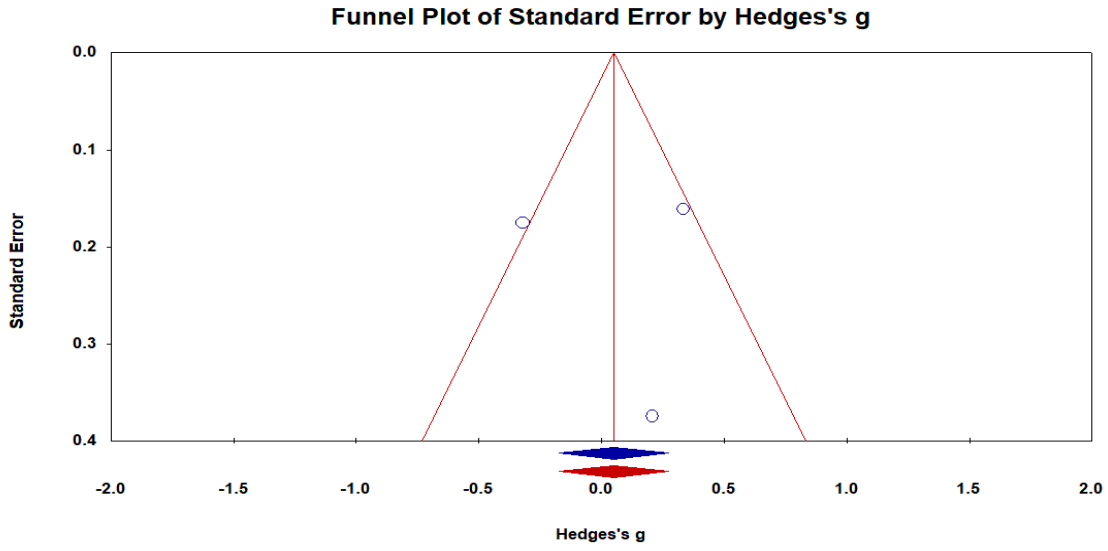

Figure 4: Funnel Plot Representing Publication Bias for Schema therapy

Duval and Tweedie's Trim and Fill Method (Imputation-based approach)

A trim-and-fill analysis using the Duval and Tweedie method was conducted to identify the possibility of any potential missing studies. The researchers utilized the method to estimate the potential of missing studies to create symmetry for funnel plot. Keeping in view the publication bias, and the aim was to identify the possible reasons behind the observed fixed effect. Value reveals that the effect is not statistically significant, 0.0502, with a confidence interval of - 0.1718 to 0.2723. Q-value also portrays heterogeneity on the observed random effect. The value 0.0564, with a confidence interval of - 0.4241 to 0.571,

this also shows not significant, but the confidence interval expands, highlighting between-study variation. This suggests minimal bias.

Table 5
Duval and Tweedie's Trim

Study Trend	Model	Point Estimate	95% CI Lower Limit	95%CI Upper Limit	Q-value	Notes
Observed	Fixed Effect	0.0502	-0.1718	0.2723	7.689	Original observed effect
Observed	Random Effect	0.0564	-0.4241	0.571	7.689	Random-effects model
Adjusted (Trim & Fill)	Random Effect	0.0564	-0.4241	0.571	7.689	0 missing study imputed to correct funnel plot asymmetry

Eager's Regression Intercept (Statistical test)

The regression test offered by Egger offered a formal statistical test of small-study effects. The result indicate non-significant evidence with respect to publication bias. A wide confidence interval reflect imprecision of the intercept estimate, not the presence of bias.

Table 6
Eager's Regression Intercept

Test	Inter-cept	Standard Error	95% CI LL	95% CI UL	T	Diff. P	One-tailed P	Two-tailed P
Egger's Regression	0.2619	5.235	-66.26	66.78	0.050	1	0.484	0.968

Risk of Bias Assessment

We assessed the included RCTs using standard risk-of-bias criteria (see table).

Table 7
Risk of Bias Assessment

Study ID	D1	D2	D3	D4	D5
Knutsson et al., (2020)	Low	Moderate	Low	Moderate	Low
Balje et al., (2024)	Low	Moderate	Low	Low	Low
Balje et al., (2025)	Low	Moderate	Low	Moderate	Low

Discussion

Findings of this systematic review and meta-analysis indicate that the influence of Schema Therapy on Social Anxiety Disorder (SAD) is small when it comes to alleviating the symptoms of social anxiety. The effect size (g = 0.050) was minimal and this means that, although Schema Therapy might have potential, the effect of this treatment is not as significant as those of more well-known methods such as Cognitive Behavioral Therapy (CBT). The general heterogeneity of the studies also indicates that the impact of Schema Therapy is not the same, and other variables like comorbid factors or mode of treatment might affect its impact. When compared to the past literature, this result can be aligned with such studies as those by Arendt et al., (2024) and Norton et al., (2023), which are mixed with respect to the effectiveness of Schema Therapy in SAD. Although it has been postulated that sometimes Schema Therapy can prove to be highly effective, especially when applied to sample sufferers of comorbid personality disorders (e.g., avoidant personality disorder), there have been studies that have pointed out that more rigorous trials and larger sample sizes are required. Our research paper adds to this expanding literature pool, offering a more recent synthesis of the effectiveness of Schema Therapy on SAD, especially in participants with personality comorbidities.

The meta-analysis effect size of reducing the symptoms of Social Anxiety Disorder (SAD) was not statistically significant and supported the use of Schema Therapy. The g of the Hedges turned out to be 0.050 and its 95% interval was -0.424 to 0.571 meaning the effect is not substantial and the actual direction of the effect is unclear. The I^2 value showed that there was significant heterogeneity amongst the studies (73.5%). The random-effects model showed that there was a broader range of confidence and the results of the study were different. No apparent moderating factors were revealed in subgroup and sensitivity analysis. The funnel plot analysis was asymmetrical indicating publication bias. This observation was corroborated by the test by Egger and suggests that there are possibly small-study effects. The estimates were adjusted using the trim-and-fill method which demonstrated the small and non-significant effect.

Past research findings, including the works by Arendt et al., (2024) and Giesen-Bloo et al., (2006) have proven that Schema Therapy is more effective compared with the traditional CBT in the treatment of patients with comorbid mental health issues. In our analysis, however, the difference between Schema Therapy and other interventions, including Cognitive Behavior Therapy (CBT) was not significant in the reduction of SAD symptoms. This may be explained by the fact that a small number of studies were included in the meta-analysis and different studies used different treatment protocols. Peeters et al., (2022) also reported that the variability of the schema therapy trials does not allow generalization of the findings. Furthermore, as revealed in the research by Balje et al., (2024) and Alsubaie, (2024) the effect of Schema Therapy can be long-lasting compared to the CBT, especially on those who failed to react favorably to alternative treatments. These results are also supported by our study, although the failure to find any significant statistics may indicate that the benefits of Schema Therapy are more evident in bigger or more protracted studies.

Conclusion

This meta-analysis and systematic review indicate that the effect of Schema Therapy on the symptoms of Social Anxiety Disorder could be slight. Nevertheless, the effect size was not large, and there was a huge heterogeneity in the results. Future research needs more methodologically rigorous studies with long follow-ups to understand the potential of the Schema Therapy in the treatment of SAD, especially in patients with comorbid personality disorders.

Limitations

Although this review provides information about Schema Therapy with SAD, there are a number of limitations that have to be taken into account. The small quantity of studies used in the meta-analysis. The dissimilarity in the design of the studies, intervention format, and outcome measures contributes to the high level of heterogeneity in the studies and therefore, it becomes difficult to draw a conclusive finding. Although bias was measured and control was made, some of the studies that are included in this review had moderate to high risks of bias especially on randomization and blinding which could have affected the results. Publication bias might also have been a factor in the exclusion of the non-English studies and unpublished data, overestimating the efficacy of the Schema Therapy.

Implications

The review has a number of clinical practice implications: Schema Therapy can help patients with SAD that have failed to respond to the conventional interventions, such as CBT, particularly those with comorbid personality disorders (e.g., avoidant personality disorder). Clinicians should include Schema Therapy in the treatment plans with the persons having severe or chronic SAD in order to apply interventions with references to particular schema like defectiveness, abandonment, and emotional deprivation. The results indicate that the

use of the Schema Therapy should be included in the therapeutic environment where people should receive long-term, individualized treatment to achieve the long-term reduction of symptoms.

Recommendations

Having received the results of this review, it is possible to suggest the following recommendations on how future research can be conducted. To increase the statistical power and the generalizability of the findings, larger sample sizes should be used in future studies. Follow-up studies with longer-term follow-ups are necessary to establish the sustainability of the effects of Schema Therapy on SAD. Further research is needed to investigate possible moderators, including the comorbidity of other disorders, or particular domains of schema, in order to understand who is benefiting the most in terms of using the Schema Therapy.

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