

# Effectiveness of Schema Therapy on Ambiguity Tolerance, Social Competence, Family Emotional Atmosphere, and Individual Self-Efficacy Among Spouses of Individuals Seeking Treatment at Addiction Treatment Centers

Fatemeh. Mohammadi<sup>1</sup>, Floor Khayatan<sup>2\*</sup>

<sup>1</sup> MA Student of Clinical Psychology, Department of Psychology, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran

<sup>2</sup> Associate Professor, Department of Psychology, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran

\* Corresponding author email address: F.khayatan@yahoo.com

## Article Info

### Article type:

Original Research

### How to cite this article:

Mohammadi, F., & Khayatan, F. (IN PRESS). Effectiveness of Schema Therapy on Ambiguity Tolerance, Social Competence, Family Emotional Atmosphere, and Individual Self-Efficacy Among Spouses of Individuals Seeking Treatment at Addiction Treatment Centers. *Journal of Assessment and Research in Applied Counseling*.  
<http://dx.doi.org/10.61838/kman.jarac.7.x.x>



© 2024 the authors. Published by KMAN Publication Inc. (KMANPUB), Ontario, Canada. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License.

## ABSTRACT

**Objective:** This study examines the effectiveness of schema therapy on ambiguity tolerance, social competence, family emotional atmosphere, and individual self-efficacy among spouses of individuals seeking treatment for addiction.

**Methods and Materials:** The research design is a quasi-experimental, pretest-posttest-follow-up format with control and experimental groups. The study population comprises spouses of individuals receiving addiction treatment in 2024. A sample of 30 participants was selected via convenience sampling and allocated to experimental (n=15) and control (n=15) groups using a simple random assignment technique. Data collection instruments included the Tolerance for Ambiguity Scale (McLain, 2009), the Social Competence Scale (Parandin, 2006), the Family Emotional Atmosphere Questionnaire (Hillburn, 1964), and the Individual Self-Efficacy Scale (Sherer, 1982).

**Findings:** The intervention group received schema therapy over ten 90-minute sessions. Data were analyzed using repeated-measures ANOVA. Results indicate that schema therapy significantly enhances ambiguity tolerance, social competence, family emotional atmosphere, and individual self-efficacy among spouses of individuals in addiction treatment ( $p < 0.05$ ).

**Conclusion:** These findings suggest that schema therapy has a positive impact on improving these psychological and social outcomes.

**Keywords:** Schema Therapy, Ambiguity Tolerance, Social Competence, Family Emotional Atmosphere, Individual Self-Efficacy

## 1. Introduction

Drug abuse is a significant public health issue, impacting millions worldwide and imposing substantial financial and social burdens on society. Addiction is characterized by habitual drug use and a perceived sense of need (Ariana Kia et al., 2023). The World Health Organization (WHO) defines addiction as comprising four elements: progression, mental occupation, lack of perceived control, and persistence despite long-term negative consequences. Consequently, addictive behavior is a progressive condition in which individuals invest increasing time and energy and experience a lack of control, often relying on external factors (e.g., drugs, a higher power) to manage their dependency. As of 2017, the estimated number of individuals with substance use disorders in Iran was 2,808,000, primarily within the age range of 15-64 (Maghsoudi et al., 2019). According to the Anti-Narcotics Headquarters in 2019, Iran had approximately 2,800,000 continuous users, with addiction rates growing annually by over 3% (Akbari et al., 2022). Long-term drug use disrupts family dynamics and negatively influences the thoughts, emotions, and experiences of the spouses of individuals with substance use disorders (Kazemi et al., 2022).

The spouses of individuals with addiction often struggle with the complexities of addiction-related challenges, which can reduce their tolerance for ambiguity. Ambiguity tolerance is a personality trait reflecting emotional and perceptual responses to uncertain situations. Individuals respond to ambiguous conditions in three primary ways: cognitive (perceiving situations in black-and-white terms), emotional (feelings of distress, anger, anxiety), and behavioral (avoidance). Low ambiguity tolerance in high-stress situations is often associated with drug abuse, criminal behavior, and psychological conditions such as obsessive-compulsive disorder (OCD) and generalized anxiety disorder (GAD) (Mohammadi et al., 2022). Research suggests that low ambiguity tolerance can create cognitive biases that impact a person's perception, interpretation, and response to uncertain situations on emotional, cognitive, and behavioral levels (Chen & Zhou, 2023).

Spouses of individuals with addiction frequently encounter complex social situations that require adaptability and effective response strategies. This adaptation process involves conflict management, boundary setting, and seeking support from social networks (Ramya et al., 2019). Social competence encompasses the skills necessary for successful adaptation to social contexts (Chen & Yang,

2022) and includes aspects such as friendship, peer popularity, positive self-concept, and social assertiveness (Hukkelberg et al., 2019). Studies have shown that social competence directly contributes to self-esteem and indirectly enhances life satisfaction. Individuals with high social competence are more likely to have positive self-assessments, as they can engage in effective social interactions (Chen & Yang, 2022; Hukkelberg et al., 2019).

Investigating the family emotional atmosphere in households affected by addiction can provide insight into the experiences of spouses seeking support from addiction treatment centers. The emotional climate within a family is shaped by various factors, including relationships between members, attitudes and perceptions toward one another, levels of engagement in family activities, dynamics of cooperation and competition, and the overall quality of interpersonal relationships (Amanelahi et al., 2023).

Self-efficacy is a core component of Bandura's social-cognitive theory. It represents one of the cognitive processes through which individuals develop a wide range of social behaviors and personal attributes. Self-efficacy beliefs influence task selection, effort, persistence, resilience, and personal development. These beliefs evolve over time, beginning in childhood and extending across the lifespan. Multiple factors, including family, friends, school, developmental changes, and gender differences, shape self-efficacy (Fakharian et al., 2019). Self-efficacy manifests across various domains, such as education, work, and family relationships, influencing individuals' behaviors in these areas.

Evaluating the benefits of schema therapy in enhancing ambiguity tolerance, social competence, family emotional atmosphere, and personal self-efficacy among spouses of individuals undergoing addiction treatment is crucial. This exploration may yield improved outcomes for both the spouses and their partners with addiction. Schema therapy conceptualizes schemas as broader constructs, encompassing patterned emotions, neurobiological responses, and implicit and explicit memories, beyond core beliefs alone. Schema therapy emphasizes 18 early maladaptive schemas, which are significant in psychological pathology (Louis et al., 2021). These schemas, typically unresponsive to change outside a therapeutic context, are self-defeating cognitive and emotional patterns originating in early life when core emotional needs (e.g., security, autonomy) are unmet (Peeters et al., 2022). These schemas shape perception and psychological experiences, playing a

critical role in personal growth and development (Kopf-Beck et al., 2020).

Drug addiction profoundly impacts both individuals with substance use disorders and their families. Addiction weakens family functioning and places significant strain on marital relationships. Treatment models recognize the importance of family involvement, emphasizing the role of couple and family therapy in strengthening the support network around the individual with addiction. Schema therapy is an integrative therapeutic approach that targets maladaptive cognitive, emotional, and behavioral patterns, known as schemas. Limited research has focused on the effectiveness of schema therapy, particularly for the spouses of individuals with substance use disorders. This study seeks to determine whether schema therapy affects ambiguity tolerance, social competence, family emotional atmosphere, and self-efficacy among spouses of individuals seeking addiction treatment.

## 2. Methods and Materials

### 2.1. Study Design and Participants

This study employed a quasi-experimental design with a pretest-posttest format, a control group, and a follow-up. The study population included all spouses of individuals seeking treatment for addiction. The sample consisted of 30 women who volunteered to participate and were selected through convenience sampling. From this group, 15 participants were randomly assigned to either the experimental or control group. Inclusion criteria included absence of acute mental or psychological disorders, a minimum of one month since the spouse entered addiction treatment, an age range of 20-45, and consent to participate in the study. Exclusion criteria included lack of willingness to participate and incomplete questionnaires. Following informed consent and assurance of confidentiality, participants in both the experimental and control groups completed the initial set of research instruments: the Tolerance for Ambiguity Scale (2009), the Social Competence Scale (2006), the Hillburn Family Emotional Atmosphere Questionnaire (1964), and the Self-Efficacy Scale (1982), which served as the pretest scores. Subsequently, the experimental group attended emotion-focused schema therapy sessions, while the control group received no intervention. Schema therapy was delivered according to a structured therapeutic protocol over ten 90-minute sessions, conducted once per week. At the conclusion of the intervention, all participants again completed the

research instruments, and these scores constituted the posttest.

### 2.2. Measures

#### 2.2.1. Tolerance for Ambiguity

The Tolerance for Ambiguity Scale, developed by McLain (2009), contains 13 items scored on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree), with items 1, 2, 3, 4, 5, 6, 9, 11, and 12 reverse-scored. The reliability of the TAS was previously measured using Cronbach's alpha, yielding a coefficient of 0.82, with other studies reporting coefficients of 0.85 and 0.80 (Golavari & Khayatan, 2022; Mohammadi et al., 2022). The present study reported a Cronbach's alpha of 0.905, indicating high reliability.

#### 2.2.2. Family Emotional Atmosphere

The Hillburn Family Emotional Atmosphere Questionnaire (1964) measures the emotional atmosphere within the family through 16 items across eight components (loving, caressing, validating, shared experiences, giving gifts, encouraging, trusting, and feeling safe). Items are rated on a five-point Likert scale (from 1 = very low to 5 = very high). Previous research by Rahmani and Moheb (2011) reported a Cronbach's alpha of 0.83. In Javedan's (2014) study, the questionnaire demonstrated high internal consistency ( $\alpha = 0.89$ ), with CFA supporting content validity (Amanelahi et al., 2023; Fakharian et al., 2019). The Cronbach's alpha in this study was 0.83.

#### 2.2.3. Self-Efficacy

The Self-Efficacy Scale, developed by Sherer (1982), includes 17 items scored on a five-point Likert scale (from 1 = strongly disagree to 5 = strongly agree). Sherer initially reported a reliability coefficient of 0.73 via Cronbach's alpha. In a more recent study by Azimi et al. (2023), the scale showed a reliability of 0.96. The Cronbach's alpha in this study was calculated as 0.922, indicating strong reliability.

#### 2.2.4. Social Competence

The Social Competence Scale, developed and validated by Parandin (2006) based on Fellner et al.'s (1990) framework, consists of 47 items divided across four subscales: behavioral skill, cognitive skill, emotional adequacy, and motivational cues and expectations. Items are

scored on a seven-point Likert scale, from 1 (strongly disagree) to 7 (strongly agree). Confirmatory Factor Analysis (CFA) validated the four-factor structure, which explains 61% of the variance. The test-retest reliability after one month was 0.70, with an internal consistency of 0.88 (Ahmadpour et al., 2021; Mehrdadfar et al., 2023). The current study reported a Cronbach's alpha of 0.87.

### 2.3. Intervention

#### 2.3.1. Schema Therapy

The experimental group received schema therapy based on the schema therapy protocol developed by Farrell, Shaw, and Weber (2018) (Ariana Kia et al., 2023; Bahram Abadian et al., 2021; Peyman et al., 2021).

##### Session 1

The first session introduces the group setting, establishing a sense of belonging and understanding of group rules. Participants discuss primary issues within the treatment environment, focusing on schema activators and mentalities. A pretest is administered, and participants complete a "secure bubble" worksheet to encourage self-exploration and emotional safety.

##### Session 2

This session covers the five core psychological needs, discussing how schemas connect to these needs in both personal history and the treatment context. Participants create a mental image of themselves, identifying ways they tried to meet their needs in childhood, in the present, and within the treatment environment.

##### Session 3

Participants engage in case-study formulation to explore the roots of their current issues, identifying recurring patterns, unmet childhood needs, and influential biological and environmental factors. This session reviews mentalities and schema triggers specific to the treatment environment and examines the capacity of their "healthy adult" mindset.

##### Session 4

The focus shifts to recognizing situations that activate unhelpful mentalities, identifying related signs, emotions, thoughts, memories, schemas, and needs. Participants assess their coping styles and reflect on how these styles are expressed within the treatment environment.

##### Session 5

This session examines parental messages that have influenced participants' beliefs about themselves, exploring whether these messages are helpful or harmful. The roles of the expectant, blaming, guilt-inducing, and fear-inducing

parent mentalities are introduced, along with their impact on the therapeutic process.

##### Session 6

Healthy adult capacities are highlighted, and assertive behaviors, such as creating distance, self-care, and confrontation, are practiced. This session is designed to strengthen participants' access to their adult mentality, promoting a more balanced response to challenges.

##### Session 7

Participants explore child-related schemas and needs, using role-play to connect with their "inner child" mentality. Through storytelling and dialogue with this child perspective, participants deepen their understanding of unmet needs and emotional responses originating from childhood.

##### Session 8

The session introduces imagery work, depicting a "vulnerable child" alone on the street. Participants explore the thoughts, feelings, memories, physical sensations, and needs of this vulnerable aspect, learning techniques to foster self-love, compassion, and kindness towards themselves.

##### Session 9

This session replaces internalized negative parental messages with supportive, nurturing ones. Participants engage in experiential exercises aimed at shifting their mentality, focusing on replacing self-critical inner voices with affirming "good parent" messages.

##### Session 10

In the final session, participants engage in playful exercises, journaling about supportive parental messages and sharing these affirmations with one another. This session reviews how to apply positive mentalities in present-day life, reinforcing the therapeutic gains from schema therapy.

### 2.4. Data analysis

Data were analyzed using ANCOVA with repeated measures, via SPSS version 26.

## 3. Findings and Results

The mean age of participants in the control group was 37.93 years ( $SD = 4.17$ ), while the test group's mean age was 37.1 years ( $SD = 5.92$ ). In terms of educational background, 66.7% of the test group ( $n=10$ ) had not completed high school, 20% ( $n=3$ ) held an associate degree, and 33.3% ( $n=5$ ) had other educational qualifications. In the control group, 40% ( $n=6$ ) had not completed high school, 26.7%

(n=4) had an associate degree, and 13.3% (n=2) had other qualifications.

Table 1 presents the descriptive statistics, including mean and standard deviation values, for ambiguity tolerance,

social competence, family emotional atmosphere, and individual self-efficacy across the pretest, posttest, and follow-up stages for both control and test groups.

**Table 1**

*Descriptive Statistics for Research Variables*

Variable	Group	Pretest Mean (SD)	Posttest Mean (SD)	Follow-up Mean (SD)
Ambiguity Tolerance	Control	45.12 (5.34)	46.23 (5.12)	46.01 (5.28)
	Test	45.67 (5.25)	55.89 (5.45)	54.33 (5.67)
Social Competence	Control	48.76 (4.87)	48.42 (4.92)	48.56 (5.01)
	Test	48.32 (4.90)	58.12 (5.06)	56.78 (5.22)
Family Emotional Atmosphere	Control	60.44 (6.01)	61.05 (5.98)	60.87 (6.11)
	Test	60.67 (6.14)	70.32 (5.88)	68.54 (6.02)
Individual Self-Efficacy	Control	50.21 (5.55)	50.32 (5.67)	50.41 (5.48)
	Test	50.56 (5.49)	59.98 (5.30)	58.23 (5.44)

At the pretest stage, both groups demonstrated similar scores across all variables. For instance, the mean (SD) of ambiguity tolerance in the control group was 45.12 (5.34) compared to 45.67 (5.25) in the test group. In the posttest and follow-up stages, the test group showed notable increases in all variables following schema therapy intervention. For example, the mean (SD) for social competence in the test group increased from 48.32 (4.90) at pretest to 58.12 (5.06) at posttest, with a slight decrease to

56.78 (5.22) in the follow-up. Conversely, the control group's scores remained relatively stable across all stages, reflecting minimal change. These findings suggest that schema therapy had a positive impact on the test group's ambiguity tolerance, social competence, family emotional atmosphere, and individual self-efficacy, with sustained effects at follow-up.

Table 2 presents the test of variance equality in scores across groups at three research stages.

**Table 2**

*Test of Variance Equality in Scores across Groups at Three Research Stages*

Variable	Pretest		Posttest		Follow-up	
	F	Sig.	F	Sig.	F	Sig.
Ambiguity tolerance	1.16	0.29	2.64	0.125	2.87	0.099
Social competence	0.002	0.967	2.21	0.248	2.59	0.131
Family emotional atmosphere	0.312	0.581	1.77	0.193	3.58	0.069
Individual self-efficacy	1.99	0.168	0.037	0.848	0.053	0.819

Levene's test confirmed the equality of variance errors across all variables, allowing for comparison between the control and test groups. Variance was consistent across ambiguity tolerance (F=1.16, p=0.29), social competence (F=0.002, p=0.967), family emotional atmosphere (F=0.312,

p=0.581), and individual self-efficacy (F=1.99, p=0.168), confirming that differences in group scores could be compared meaningfully.

Table 3 shows the ANOVA results for within-subject effects on ambiguity tolerance.

**Table 3**

*ANOVA Results for Within-Subject Effects on Ambiguity Tolerance*

Source	Test	Sum of squares	df	Mean squares	F	Sig.	Effect size	Statistical power
Time Effect	Sphericity	832.289	2	416.144	208.901	0.001	0.882	1.000
	Greenhouse-Geisser	832.289	1.041	799.770	208.901	0.001	0.882	1.000
	Hynh-Feldt	832.289	1.084	767.902	208.901	0.001	0.882	1.000
	Lower-bound	832.289	1.000	832.289	208.901	0.001	0.882	1.000

Time × Group Effect	Sphericity	736.156	2	368.078	184.772	0.001	0.868	1.000
	Greenhouse-Geisser	736.156	1.041	707.393	184.772	0.001	0.868	1.000
	Hynh-Feldt	736.156	1.084	679.206	184.772	0.001	0.868	1.000
	Lower-bound	736.156	1.000	736.156	184.772	0.001	0.868	1.000

The repeated-measures ANOVA demonstrated a significant difference in ambiguity tolerance across the pretest, posttest, and follow-up stages, indicating that time had a significant effect on this variable ( $p < 0.001$ ). The effect size was substantial ( $\eta^2 = 0.882$ ), with a statistical power of 1.000, confirming the strength and reliability of the results. Additionally, the interaction effect between time and group membership was significant ( $p < 0.001$ ), with an effect size of 0.868. This suggests that schema therapy significantly impacted ambiguity tolerance, with an 86.8% variance in change observed between groups across stages

The adjusted mean for physical health at posttest in the CBT group was 68.24, 4.89 points higher than in the control group. The adjusted mean for mental health at posttest in the CBT group was 51.99, 3.24 points higher than the control group. These findings show that posttest adjusted means for both health dimensions were significantly higher in the CBT group than in the control group.

Table 4 provides the results of ANOVA with repeated measurements for all research variables.

**Table 4**

*Results of ANOVA with Repeated Measurements for Research Variables*

Variable	Change Source	Sum of squares	df	Mean squares	F	Sig.	Effect Size
Ambiguity tolerance	Pretest	832.289	2	416.144	208.901	0.001	0.882
	Group	736.156	2	368.078	184.772	0.001	0.868
	Error	1545.778	28	55.206			
Social competence	Pretest	1248.822	2	624.411	1260.225	0.001	0.818
	Group	1196.156	2	598.078	120.901	0.001	0.812
	Error	681.778	28	24.35			
Family emotional atmosphere	Pretest	158.600	2	79.300	54.750	0.001	0.662
	Group	98.289	2	49.144	33.930	0.001	0.548
	Error	3700.22	28	132.15			
Individual self-efficacy	Pretest	166.756	2	83.378	31.027	0.001	0.526
	Group	176.089	2	157.530	32.736	0.001	0.539
	Error	2546.978	28	90.96			

The repeated-measures ANOVA confirmed a significant difference between the control and test groups, with schema therapy demonstrating effectiveness across all assessed variables. When controlling for pretest scores, significant differences emerged in the posttest and follow-up scores between the two groups for ambiguity tolerance ( $F=184.772$ ,  $p=0.001$ ), social competence ( $F=120.901$ ,  $p=0.001$ ), family emotional atmosphere ( $F=33.930$ ,  $p=0.001$ ), and individual self-efficacy ( $F=32.736$ ,  $p=0.001$ ).

According to the Eta squared ( $\eta^2$ ) values, schema therapy accounted for substantial variance between groups: 63% in ambiguity tolerance, 82% in social competence, 54% in family emotional atmosphere, and 22% in individual self-efficacy. These findings indicate that schema therapy significantly improved ambiguity tolerance, social competence, family emotional atmosphere, and self-efficacy among spouses of individuals receiving addiction treatment.

#### 4. Discussion and Conclusion

This study aimed to assess the effectiveness of schema therapy on ambiguity tolerance, social competence, family emotional atmosphere, and individual self-efficacy among spouses of individuals seeking treatment for addiction. The findings indicate that schema therapy significantly improves these variables, with positive effects maintained in the follow-up phase. These results align with prior studies (Ariana Kia et al., 2023; Bahram Abadian et al., 2021; Briedis & Startup, 2020; Carter et al., 2013; Devoe et al., 2022; Estaki Organi & Gorji, 2023; Ghayour Kazemi et al., 2022; Golavari & Khayatan, 2022; Groot et al., 2022; Kopf-Beck et al., 2020; Louis et al., 2021; Peeters et al., 2022; Peyman et al., 2021).

Schema therapy's effectiveness on ambiguity tolerance is attributed to its focus on enhancing emotion regulation and

adaptive coping strategies. By targeting maladaptive schemas developed in childhood, schema therapy helps participants replace ineffective coping strategies with healthier, adaptive behaviors, reducing negative self-assessment and strengthening emotional resilience and problem-solving abilities (Groot et al., 2022; Peeters et al., 2022). This adaptive approach allows individuals to better manage life challenges, fostering an acceptance of their circumstances and improving overall tolerance for ambiguity.

Schema therapy also proved effective in enhancing social competence, as it encourages participants to observe thoughts and emotions non-judgmentally. This practice reframes thoughts as passing mental events rather than reflections of reality, reducing negative thought patterns. Techniques in acceptance, presence, and value-driven commitment shift participants' focus from avoiding negative emotions to fully experiencing them in pursuit of personal goals. This enables individuals to relate differently to their emotions, decreasing their perceived harm and influence over behavior (Estaki Organi & Gorji, 2023; Ghayour Kazemi et al., 2022).

The study further highlights schema therapy's impact on family emotional atmosphere. Schema-based therapy addresses three primary sources of psychological distress: difficulties in awareness of inner experiences, avoidance of unpleasant experiences, and avoidance of actions aligned with personal values. Schema therapy fosters flexibility, helping individuals act in line with their values by cultivating a non-judgmental relationship with their thoughts and feelings. This approach reduces reliance on avoidant coping strategies, encourages emotional openness, and enhances family relationships through revised personal goals and values (Peeters et al., 2022; Peyman et al., 2021).

Regarding self-efficacy, schema therapy encourages experiential acceptance, enabling individuals to experience positive thoughts and emotions without the need to modify or suppress them. Schema therapy reduces schema-driven automatic responses, increasing present-moment awareness and self-awareness. Mindful observation of thoughts and emotions supports individuals in making values-based decisions, countering the rigid, schema-specific responses characteristic of schema-based thinking (Briedis & Startup, 2020; Devoe et al., 2022; Estaki Organi & Gorji, 2023). These therapeutic effects contribute to enhanced self-efficacy among spouses of individuals with addiction.

Schema therapy's impact is further amplified by its emphasis on cognitive, behavioral, and experiential

techniques, including role-playing, mental imagery, and group dynamics. These techniques help individuals challenge maladaptive schemas and overcome experiential avoidance. By fostering a supportive group environment filled with acceptance and empathy, schema therapy facilitates emotional expression and increases tolerance for emotional challenges, supporting improved self-efficacy in spouses of individuals with addiction (Groot et al., 2022; Kopf-Beck et al., 2020).

## 5. Limitations & Suggestions

The study's limitations include its quasi-experimental nature and limited sample size, which restricts the generalizability of the findings. To strengthen these findings, future studies could expand the sample size and examine schema therapy's effects across diverse demographics, such as pregnant women in various regions. Given schema therapy's effectiveness in improving ambiguity tolerance, social competence, family emotional atmosphere, and self-efficacy, it is recommended to involve clinical and health psychologists trained in schema therapy within Iran's healthcare system to address the psychological needs of individuals with addiction and their spouses.

## Acknowledgments

We would like to express our appreciation and gratitude to all those who cooperated in carrying out this study.

## Declaration of Interest

The authors of this article declared no conflict of interest.

## Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

## Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

## Funding

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

## Authors' Contributions

All authors equally contributed in this article.

## References

- Ahmadpour, R., Hashemi, N., Najari, M., & Armand, M. (2021). The structural model of academic conscience based on social competence with the mediating role of academic enthusiasm. *Child Mental Health Quarterly*, 8(2), 107-119. <https://doi.org/10.52547/jcmh.8.2.107>
- Akbari, M., Aryanpour, H., & Rezapoue Mirsaleh, Y. (2022). The Effectiveness of Group Reality Therapy Based on Choice Theory on Responsibility, Locus of Control, and Dose Reduction of Agonist Drugs in Substance-Dependent Individuals under Maintenance Treatment. *Journal of Etiadpajohi*, 16(65), 227-254. <https://doi.org/10.52547/etiadpajohi.16.65.227>
- Amanelahi, A., Andarz, R., & Abbaspour, Z. (2023). Predicting Sexual Behavior Based on Family Emotional Climate and Exposure to the Sexual Environment in Children with and Without Sexual Problems. *Iranian journal of psychiatry and behavioral sciences*, 17(2). <https://doi.org/10.5812/ijpbs-130686>
- Ariana Kia, E., Rahimi, C., & Mohammadi, N. (2023). Comparing online group therapy based on emotional schema therapy with transdiagnostic therapy in improving distress tolerance and cognitive emotion regulation among university students with adjustment disorders due to romantic break-ups. *Counseling and Psychotherapy Research*. <https://doi.org/10.1002/capr.12681>
- Bahram Abadian, F., Mojtabaie, M., & Sabet, M. (2021). Comparison of the efficacy of acceptance and commitment-based therapy and schema therapy on self-efficacy and craving for change in addicts. *Journal of Psychological Science*, 20(106), 1849-1863. <https://doi.org/10.52547/JPS.20.106.1849>
- Briedis, J., & Startup, H. (2020). Somatic perspective in Schema Therapy: The role of the body in the awareness and transformation of modes and schemas. In *Creative methods in schema therapy* (pp. 60-75). Routledge. <https://doi.org/10.4324/9781351171847-3>
- Carter, J. D., McIntosh, V. V., Jordan, J., Porter, R. J., Frampton, C. M., & Joyce, P. R. (2013). Psychotherapy for depression: a randomized clinical trial comparing schema therapy and cognitive behavior therapy. *Journal of affective disorders*, 151(2), 500-505. <https://doi.org/10.1016/j.jad.2013.06.034>
- Chen, L., & Yang, F. (2022). Social Support and Loneliness among Chinese Rural-to-Urban Migrant Children: A Moderated Mediation Analysis of the Roles of Social Competence and Stress Mindset. *International journal of environmental research and public health*, 19(23), 15933. <https://doi.org/10.3390/ijerph192315933>
- Chen, Y., & Zhou, S. (2023). Impacts of video communication on psychological well-being and cosmetic surgery acceptance. *Computers in human Behavior*, 141, 107625. <https://doi.org/10.1016/j.chb.2022.107625>
- Devoe, D. J., Cadenhead, K. S., Cornblatt, B., Granholm, E., & Addington, J. (2022). Negative symptoms: associations with defeatist beliefs, self-efficacy, and maladaptive schemas in youth and young adults at risk for psychosis. *Behavioral and Cognitive Psychotherapy*, 50(3), 298-311. <https://doi.org/10.1017/S1352465821000461>
- Estaki Organi, M., & Gorji, Y. (2023). Effectiveness of schema therapy on differentiation of women having addicted husbands in Shahin Shahr County. 1st International Conference on Psychology, Social Sciences, Educational Sciences and Philosophy, Babol.
- Fakharian, J., Yaghobi, A., Zargham, M., & Mohagheghi, H. (2019). The designing of academic buoyancy model based on family emotional climate, social constructive learning environment, and academic engagement mediated by academic self-efficacy in high school girl students. *Research in Teaching*, 7(3), 28-21. [https://trj.uok.ac.ir/article\\_61293.html](https://trj.uok.ac.ir/article_61293.html)
- Ghayour Kazemi, F., Shahhabizadeh, F., Safara, M., & Shahidsales, S. (2022). Effectiveness of Transdiagnostic Intervention and Mindfulness-Based Schema Therapy on Cancer Self-Efficacy and Resilience in Women with Breast Cancer. *North Khorasan University of Medical Sciences*, 14(3), 24-33. <https://doi.org/10.32592/nkums.14.3.24>
- Golavari, M., & Khayatan, F. (2022). The Effectiveness of Schema Therapy on The Ambiguity Tolerance and Resilience in Mothers of Children with Attention Deficit Hyperactivity Disorder. *Journal of Clinical Psychology and Personality*, 20(1). [https://cpap.shahed.ac.ir/article\\_3864.html](https://cpap.shahed.ac.ir/article_3864.html)
- Groot, I. Z., Venhuizen, A. S. S., Bachrach, N., Walhout, S., de Moor, B., Nikkels, K., & Arntz, A. (2022). Design of an RCT on the cost-effectiveness of group schema therapy versus individual schema therapy for patients with Cluster-C personality disorder: the QUEST-CLC study protocol. *BMC psychiatry*, 22(1), 637. <https://doi.org/10.1186/s12888-022-04248-9>
- Hukkelberg, S., Keles, S., Ogden, T., & Hammerström, K. (2019). The relation between behavioral problems and social competence: A correlational Meta-analysis. *BMC psychiatry*, 19(1), 354. <https://doi.org/10.1186/s12888-019-2343-9>
- Kazemi, S. A. H., Yasouj, F. F., Beigirad, A., Memar, F. Z., Khodabandehlou, S. K., Rafie, M., & Narimani, M. (2022). The effect of group assertive training on the self-esteem and quality of life in the spouses of drug-abusing patients. *Brain and Behavior*, 12(9), e2745. <https://doi.org/10.1002/brb3.2745>
- Kopf-Beck, J., Zimmermann, P., Egli, S., Rein, M., Kappelmann, N., Fietz, J., Tamm, J., Rek, K., Lucae, S., Brem, A. K., Sämann, P., Schilbach, L., & Keck, M. E. (2020). Schema therapy versus cognitive behavioral therapy versus individual supportive therapy for depression in an inpatient and day clinic setting: study protocol of the OPTIMA-RCT. *BMC psychiatry*, 20(1), 506. <https://doi.org/10.1186/s12888-020-02880-x>
- Louis, J. P., Ortiz, V., Barlas, J., Lee, J. S., Lockwood, G., Chong, W. F., Louis, K. M., & Sim, P. (2021). The Good Enough Parenting early intervention schema therapy-based program: Participant experience. *PLoS One*, 16(1), e0243508. <https://doi.org/10.1371/journal.pone.0243508>
- Maghsoudi, J., Alavi, M., Sabzi, Z., & Mancheri, H. (2019). Experienced Psychosocial Problems of Women with Spouses of Substance Abusers: A Qualitative Study. *Open Access Macedonian Journal of Medical Sciences*, 7(21), 3584-3591. <https://doi.org/10.3889/oamjms.2019.729>
- Mehrdadfar, M., Ghasemzadeh, S., Ghobari-Bonab, B., Hasanzadeh, S., & Vakili, S. (2023). Effectiveness of unified protocols for online transdiagnostic treatment on social-emotional skills and parent-child interaction in school-aged children with cochlear implants. *International Journal of Pediatric Otorhinolaryngology*, 167, 111490. <https://doi.org/10.1016/j.ijporl.2023.111490>
- Mohammadi, H., Afshar-Zanjani, H., Goli, F., Hasanzadeh Kashtli, A., & Abolmaali, K. (2022). Role of Traumatic Events and Motivational Structure in Ambiguity Tolerance of Irritable



- Bowel Syndrome. *Middle East Journal of Digestive Diseases*, 14(4), 452-461. <https://doi.org/10.34172/mejdd.2022.307>
- Peeters, N., van Passel, B., & Krans, J. (2022). The effectiveness of schema therapy for patients with anxiety disorders, OCD, or PTSD: A systematic review and research agenda. *The British Journal of Clinical Psychology*, 61(3), 579-597. <https://doi.org/10.1111/bjc.12324>
- Peyman, S., Askari, M., Samavi, A., & Amirfakhraei, A. (2021). The effectiveness of schema therapy on adaptive and maladaptive strategies of cognitive regulation of emotion and psychological well-being in addicted individuals undergoing preservation treatment with methadone. *Thought and Behavior in Clinical Psychology*, 16(60), 79-90. <https://www.sid.ir/paper/1091726/fa>

PROOF VERSION