

## Effectiveness of Schema Mode Therapy on Ambivalence in Emotional Expression and Defense Styles in Individuals with Narcissistic Personality Disorder

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### ABSTRACT

**Purpose:** Objective: This study aimed to investigate the effectiveness of schema mode therapy on ambivalence in emotional expression and defense styles in individuals with narcissistic personality disorder.

**Methods and Materials:** This semi-experimental study employed a pretest-posttest design with a control group and follow-up. The statistical population consisted of individuals with narcissistic personality disorder who referred to counseling centers in Shiraz during 2023-2024. A total of 60 participants were selected through convenience sampling and randomly assigned to an experimental group (30) and a control group (30). The research instruments included the Emotional Expressivity Questionnaire (EEQ), the Defense Style Questionnaire (DSQ-40), and structured clinical interviews. The experimental group underwent 12 weekly 90-minute sessions of schema mode therapy, while the control group received no intervention. Data were analyzed using covariance analysis and Bonferroni post hoc tests.

**Findings:** The results indicated that schema mode therapy significantly increased positive emotional expression and intimacy while decreasing negative emotional expression in the experimental group ( $P < 0.01$ ). Additionally, a significant increase in mature defense styles and a reduction in neurotic and immature defense styles were observed in the experimental group ( $P < 0.01$ ).

**Conclusion:** Schema mode therapy is an effective approach for improving emotional expression ambivalence and transitioning from maladaptive to adaptive defense styles. This therapeutic method can be considered a suitable clinical intervention for individuals with narcissistic personality disorder.

**Keywords:** Schema mode therapy, emotional ambivalence, defense styles, narcissistic personality disorder, emotional expression.

## 1. Introduction

Schema mode therapy is one of the modern and effective approaches in treating personality disorders, developed based on maladaptive schemas and schema modes. This therapeutic method, developed by Young and colleagues, is an integration of cognitive-behavioral theories, attachment theory, and psychoanalysis. Its primary aim is to identify, modify, and replace maladaptive schemas and modes with healthy and functional patterns (Arntz et al., 2021; Edwards, 2022). Schemas, as deep and recurring patterns often formed in childhood, play a critical role in individuals' behaviors, thoughts, and emotions. When these schemas are maladaptive, they can lead to emotional and interpersonal problems (Phillips et al., 2020).

Schema mode therapy specifically focuses on identifying and modifying schema modes, which include various psychological states such as the Vulnerable Child, the Critical Parent, or the Healthy Adult. This therapeutic approach utilizes diverse techniques such as imagery rescripting, empty-chair dialogues, and mindfulness exercises to strengthen healthy modes (Edwards, 2022; Stavropoulos et al., 2020). Studies have shown that schema mode therapy can reduce psychological symptoms such as depression, anxiety, and emotional ambivalence, and can enhance interpersonal relationships (Koppers et al., 2021; Peeters et al., 2021; Peeters et al., 2022).

Ambivalence in emotional expression refers to a complex state in which an individual experiences inner conflict and contradiction in expressing emotions. This condition may stem from early maladaptive schemas and the use of dysfunctional defense mechanisms (Besharat et al., 2019). Individuals with emotional ambivalence may struggle with expressing either positive or negative emotions, which can adversely impact the quality of their interpersonal relationships and their mental health (Hadiyan et al., 2023). Research has shown that schema therapy, by reinforcing healthy modes, can reduce this ambivalence and improve individuals' ability to express emotions (Letafati Beris et al., 2021; Malekzadeh et al., 2024; Vos et al., 2023).

Defense styles, as mechanisms individuals use to manage stress and psychological conflicts, play a significant role in behavioral and emotional responses. These styles are typically categorized into three main groups: mature defense styles (e.g., humor and sublimation), neurotic defense styles (e.g., repression), and immature defense styles (e.g., denial and projection) (Jazayeri et al., 2013; Nowzari & Naziri, 2021). Research has shown that individuals with early

maladaptive schemas tend to rely more on immature defense styles, which leads to greater emotional and social dysfunction (Khosravani et al., 2016; Nejadian et al., 2017). Schema mode therapy, by identifying these mechanisms and enhancing the use of mature defense styles, contributes to improved mental health and better quality of life in patients (Boecking et al., 2024; Dimaggio, 2022).

Previous investigations have demonstrated the effectiveness of schema mode therapy in reducing symptoms of personality disorders, improving emotional expression, and modifying defense styles. For example, a study by Peeters and colleagues (2022) found that schema therapy was successful in reducing anxiety symptoms and emotional conflicts in patients with personality disorders (Peeters et al., 2022). Additionally, Farmanbar et al. (2023) confirmed the effectiveness of this approach in reducing emotional ambivalence and enhancing mentalization abilities in patients with borderline personality disorder (Farmanbar, 2023). Other studies have also shown that modifying schemas can lead to a decrease in the use of maladaptive defense styles and an increase in the use of mature ones (Khodabandelow et al., 2018; Koppers et al., 2021).

Previous studies have emphasized that personality disorders are widely influenced by maladaptive schemas and dysfunctional defense mechanisms (Mertens et al., 2020; Salgó et al., 2021). However, few studies have simultaneously examined emotional ambivalence and defense styles within the framework of schema therapy. The present study, by focusing on these two variables, seeks to expand knowledge in the field of personality disorder treatment and provide effective clinical applications (Hadiyan et al., 2023; Vos et al., 2023). Therefore, the present research was conducted to examine the effectiveness of schema mode therapy on ambivalence in emotional expression and defense styles in individuals with narcissistic personality disorder.

## 2. Methods and Materials

### 2.1. Study Design and Participants

This study employed a semi-experimental design with a pretest-posttest control group and follow-up. The statistical population consisted of individuals diagnosed with narcissistic personality disorder who referred to counseling centers in Shiraz during 2023–2024. A combination of convenience and purposive sampling methods was used. Participants were selected based on inclusion and exclusion criteria through diagnostic evaluations conducted by a

clinical psychologist using the Structured Clinical Interview for DSM-5 Disorders (SCID) for both Axis I and II diagnoses. Following the initial evaluation, 60 individuals were selected and randomly assigned to two groups: an experimental group and a control group (30 participants in each).

## 2.2. Measures

**Narcissistic Personality Inventory (NPI-16):** This inventory was developed by Ames et al. in 1979 and includes 16 pairs of items, where the respondent chooses one from each pair. The questionnaire does not contain subscales, and scoring is binary (0 or 1). The total score ranges from 0 to 16, with scores above 8 indicating narcissistic personality traits. The original study reported a reliability coefficient of 0.85, and both face and content validity were confirmed. In Iran, it was translated and standardized by Mohammadzadeh (2009), with a reported Cronbach's alpha of 0.79 (Khodabandelow et al., 2018).

**Emotional Expressivity Questionnaire (EEQ):** This questionnaire was developed by King and Emmons in 1990 and translated and standardized in Iran by Rafieinia (2001). It contains 16 items measuring three subscales: positive emotional expressivity, intimacy, and negative emotional expressivity. Responses are rated on a five-point Likert scale (ranging from “strongly disagree” to “strongly agree”). The reliability of the subscales ranges from 0.65 to 0.68, and construct validity has been confirmed through factor analysis (Hadiyan et al., 2023; Malekzadeh et al., 2024; Safikhani, 2022).

**Defense Style Questionnaire (DSQ-40):** Developed by Andrews et al. in 1993, this instrument assesses defense mechanisms. It consists of 40 items rated on a 9-point Likert scale (from “strongly disagree” to “strongly agree”). The questionnaire evaluates three types of defense styles: mature, neurotic, and immature. Reliability coefficients in the original studies exceeded 0.85. The tool was translated and standardized in Iran by Heydari-Nasab and Mohammadi (2007), and the Cronbach's alpha ranged between 0.71 and 0.78 (Khosravani et al., 2016; Namavari, 2023; Nejadian et al., 2017; Nowzari & Naziri, 2021; Yousefi et al., 2018).

## 2.3. Intervention

The schema mode therapy intervention was conducted over 12 weekly sessions, each lasting between 60 and 90 minutes, for the experimental group. The protocol, developed by Young and colleagues (2006), focused on

challenging early maladaptive schemas, identifying unhealthy modes, and strengthening healthy modes (Arntz et al., 2021). The control group received no intervention during this period and remained on a waiting list.

### Session 1:

This session was dedicated to introducing the overall structure of therapy and group rules. The goals, expectations, and session content were explained, along with an introduction to schema modes and the principles of schema mode therapy. Participants were familiarized with group therapy methods and completed the pretest questionnaires. Emphasis was placed on building trust and group cohesion. A homework assignment was provided to encourage active engagement from the outset.

### Session 2:

Following a review of the previous homework, the relationship between schema mode therapy and behavioral/cognitive processes was discussed. Group interactions were reinforced to deepen mutual trust. The session focused on expanding participants' understanding of how schema modes influence everyday behavior. A related homework assignment was given to deepen this insight.

### Session 3:

After reviewing the prior assignment, the connection between schema modes and the “inner child” was explained. Examples of schema modes were introduced, and the role of environmental and family factors in shaping schemas was explored. The session aimed to help patients understand the origins of their maladaptive modes. Homework was assigned to continue the therapeutic process.

### Session 4:

This session focused on identifying and activating schema modes. Participants revisited mental images of significant figures in their lives, such as parents and peers. Patients were encouraged to experience and attend to emotions associated with their schemas. Homework was given to extend this emotional processing.

### Session 5:

Following a review of the previous homework, participants were introduced to various coping styles. These styles were discussed in the group setting, using examples from group members. The session aimed to identify both effective and ineffective coping strategies. Homework was assigned for participants to examine these styles in real-life situations.

### Session 6:

Schema modes were challenged using objective evidence in this session. Participants identified and re-evaluated

confirmatory and disconfirming evidence related to their schema modes. The goal was to facilitate a shift in patients' perspectives on maladaptive modes. A homework task was given to practice these cognitive skills.

#### Session 7:

The advantages and disadvantages of participants' coping responses were evaluated. Schema mode educational cards were introduced, and participants were trained to use a schema tracking form. These tools were used to monitor schema changes and promote self-awareness between sessions. Related homework was assigned.

#### Session 8:

This session introduced the technique of imagery dialogue. Participants learned to initiate an inner dialogue between their schema mode and healthy self. This exercise aimed to enhance patients' ability to detach from maladaptive modes. Related exercises and homework were provided for practice.

#### Session 9:

The dialogue between the schema mode and healthy self was further explored. Participants wrote letters to their parents and engaged in imaginary conversations through the empty-chair technique. Specific behaviors were identified as potential targets for change, and homework was assigned for reflection and modification of these behaviors.

#### Session 10:

Therapeutic strategies to modify behaviors that sustain maladaptive modes were discussed. Skills for emotion regulation and impulse control were taught. Related assignments were provided to reinforce these skills.

#### Session 11:

This session focused on identifying and addressing dysfunctional modes such as the child mode, maladaptive coping mode, and dysfunctional parent mode. Participants were also taught healthier ways to communicate and express emotions. Homework was assigned to apply these skills in real-life contexts.

#### Session 12:

The final session reviewed the exercises and assignments from previous sessions. Strategies for tolerating frustration and fatigue when facing life challenges were discussed. Participants were prepared for the final assessment, and a plan for future follow-up was developed.

### 2.4. Data Analysis

Data were collected at three stages: pretest, posttest, and follow-up. Statistical analysis was performed using SPSS version 26. At the descriptive level, mean, standard deviation, and standard error were calculated. At the inferential level, analysis of covariance (ANCOVA) and Bonferroni post hoc tests were used to examine between-group differences. Repeated measures analysis of variance (ANOVA) was also conducted to assess changes over time. Assumptions of data normality, homogeneity of variances, and independence of errors were verified.

## 3. Findings and Results

Based on demographic data, 70% (21 individuals) of the experimental group were female and 30% (9 individuals) were male, whereas in the control group, 63.3% (19 individuals) were female and 36.7% (11 individuals) were male. Regarding age distribution, in the experimental group, 40% (12 individuals) were aged 20–30 years, 46.7% (14 individuals) were aged 31–40 years, and 13.3% (4 individuals) were aged 41–50 years. In the control group, these figures were 33.3% (10 individuals), 50% (15 individuals), and 16.7% (5 individuals), respectively. Regarding educational level, 16.7% (5 individuals) in the experimental group had a high school diploma or lower, 60% (18 individuals) held a bachelor's degree, and 23.3% (7 individuals) held a master's degree. In the control group, these rates were 20% (6 individuals), 66.7% (20 individuals), and 13.3% (4 individuals), respectively. These results indicate a similar demographic distribution across both groups.

**Table 1**

*Descriptive statistics of research variables in three measurement stages by group*

Group	Variable	Pretest Mean	Pretest SD	Posttest Mean	Posttest SD	Follow-up Mean	Follow-up SD
Control	Mature Defense Style	19.93	3.667	19.37	2.846	19.27	3.151
	Neurotic Defense Style	32.01	3.221	31.40	2.764	31.63	2.708
	Immature Defense Style	55.93	2.559	55.47	3.093	55.33	3.304
Experimental	Mature Defense Style	19.70	2.842	23.50	2.403	23.13	2.446
	Neurotic Defense Style	31.48	2.716	27.72	2.924	28.25	2.282
	Immature Defense Style	54.80	3.112	50.60	3.847	50.90	4.270
Control	Positive Emotional Expression	18.63	2.859	18.23	2.596	18.10	2.218

Experimental	Intimacy Expression	12.23	3.059	12.43	2.635	12.20	2.657
	Negative Emotional Expression	13.43	3.450	12.88	3.213	13.08	3.267
	Positive Emotional Expression	17.47	2.801	22.37	2.442	21.63	2.632
	Intimacy Expression	13.33	2.564	17.07	2.100	16.97	2.189
	Negative Emotional Expression	12.40	3.322	8.71	2.449	9.25	2.133

The descriptive results of this study include the means and standard deviations of the scores for defense styles and emotional expressivity variables across the three measurement stages: pretest, posttest, and follow-up for both the experimental and control groups. Table 1 displays the comparison of means and standard deviations between the two groups.

For data analysis, core assumptions including the normality of score distributions, homogeneity of variances, and independence of observations were evaluated and confirmed. The normality of variable distributions was

verified using the Shapiro–Wilk test for all three stages (pretest, posttest, and follow-up) ( $P > 0.05$ ). Levene's test confirmed the homogeneity of variances across the experimental and control groups for all assessed variables ( $P > 0.05$ ). Moreover, the independence of observations was ensured by careful group design and random assignment. The total sample size consisted of 60 participants—30 in the experimental group and 30 in the control group. The results indicated that the data were suitable for covariance analysis and post hoc tests.

**Table 2**

*Results of between-subjects effects test comparing mean scores of emotional expressivity and defense styles*

Source of Variation	Variable	Sum of Squares	df	Mean Square	F	Sig.
Group	Positive Emotional Expression	211.250	1	211.250	17.368	0.001
	Intimacy Expression	551.250	1	551.250	32.665	0.001
	Negative Emotional Expression	407.404	1	407.404	16.312	0.001
	Mature Defense Style	301.606	1	301.606	14.774	0.001
	Neurotic Defense Style	288.800	1	288.800	13.569	0.001
	Immature Defense Style	544.272	1	544.272	18.605	0.001
Error	Positive Emotional Expression	705.478	58	12.163		
	Intimacy Expression	978.811	58	16.876		
	Negative Emotional Expression	1448.569	58	24.975		
	Mature Defense Style	1184.011	58	20.414		
	Neurotic Defense Style	1234.421	58	21.283		
	Immature Defense Style	1696.722	58	29.254		

The results indicated significant differences in the mean scores of emotional expressivity (positive emotional expression, intimacy expression, and negative emotional expression) and defense styles (mature, neurotic, and immature) between the control and experimental groups. The F-values for all variables were statistically significant ( $P$

$< 0.01$ ). These findings suggest that schema mode therapy positively influenced the increase in positive emotional expression and intimacy, the reduction of negative emotional expression, the improvement of mature defense style, and the reduction of neurotic and immature defense styles in the experimental group compared to the control group.

**Table 3**

*Bonferroni post hoc test results for emotional expressivity and defense styles*

Dependent Variable	Group 1	Group 2	Mean Difference	Std. Error	Sig.
Positive Emotional Expression	Control	Experimental	-2.167	0.520	0.001
Intimacy Expression	Control	Experimental	-3.500	0.612	0.001
Negative Emotional Expression	Control	Experimental	3.009	0.745	0.001
Mature Defense Style	Control	Experimental	-2.589	0.674	0.001
Neurotic Defense Style	Control	Experimental	2.533	0.688	0.001
Immature Defense Style	Control	Experimental	3.478	0.806	0.001



The Bonferroni post hoc test results showed that the mean scores of positive emotional expression and intimacy expression in the experimental group were significantly higher than those in the control group, while the mean score of negative emotional expression in the experimental group was significantly lower than in the control group. Moreover, the mean score of mature defense style was significantly higher in the experimental group, whereas the mean scores of neurotic and immature defense styles were significantly lower compared to the control group ( $P < 0.01$ ). These results confirm the positive effects of schema mode therapy in improving emotional expressivity and defense styles.

#### 4. Discussion and Conclusion

The findings of this study revealed that schema mode therapy had a significant impact on reducing ambivalence in emotional expression and improving defense styles in individuals with narcissistic personality disorder. Analysis of variance and Bonferroni post hoc tests showed that, compared to the control group, the experimental group exhibited a statistically significant increase in positive emotional expression and intimacy, along with a reduction in negative emotional expression. Furthermore, regarding defense styles, scores for mature defense style significantly increased in the experimental group, while scores for neurotic and immature defense styles decreased.

The positive impact of schema mode therapy on emotional ambivalence can be explained by this approach's emphasis on modifying early maladaptive schemas and strengthening healthy schema modes. These findings are consistent with previous research indicating that schema therapy can improve emotional expressivity and reduce negative emotions (Hadiyan et al., 2023; Malekzadeh et al., 2024). In particular, techniques such as imagery dialogue and mental exercises used in this therapy help patients gain better emotional insight and express their emotions more effectively (Dimaggio, 2022; Edwards, 2022).

In the domain of defense styles, the findings demonstrated an increase in the use of mature defense mechanisms and a decrease in neurotic and immature defense mechanisms. These results align with studies that have shown schema therapy enhances individuals' capacity to use healthier defense mechanisms by identifying and modifying maladaptive schema modes (Dimaggio, 2022; Khosravani et al., 2016). For example, Boecking et al. (2024) demonstrated that schema therapy could improve individuals' emotional and coping responses and guide them

toward the use of more effective defense mechanisms (Boecking et al., 2024).

The present findings further support the effect of schema therapy in reducing emotional ambivalence, as this treatment targets maladaptive patterns rooted in childhood that contribute to emotional difficulties in adulthood. This outcome is in line with the study by Vos et al. (2023), which found that early maladaptive schemas directly affect emotional expression and that modifying them can enhance interpersonal communication (Vos et al., 2023).

These results are consistent with previous studies on the effectiveness of schema therapy. For instance, Farmanbar et al. (2023) found that schema mode therapy significantly reduced emotional ambivalence and mentalization difficulties in patients with borderline personality disorder (Farmanbar, 2023). Similarly, research by Koppers et al. (2021) demonstrated that schema therapy could alter maladaptive defense styles and significantly improve emotional regulation and behavioral responses (Koppers et al., 2021).

This study also confirms the findings of Dimaggio (2022) and Arntz et al. (2021), who showed that schema therapy can enhance self-esteem and reduce maladaptive behaviors in patients with personality disorders (Arntz et al., 2021; Dimaggio, 2022). These findings underscore the critical role of schema therapy in achieving deep changes in maladaptive cognitive and behavioral patterns that affect emotional regulation and interpersonal responses.

This study was accompanied by several limitations. First, the sample was limited to individuals who sought counseling services in Shiraz, which may restrict the generalizability of the findings to other populations. Second, the quasi-experimental design and small group sizes may have limited the control of environmental or individual confounding variables. Third, the data were collected through self-report measures, which may be subject to response biases or inaccuracies in self-reporting.

To expand knowledge in this area, future research could explore the long-term effects of schema therapy on the studied variables and assess the stability of treatment outcomes over time. Additionally, evaluating this therapeutic method among diverse populations—including adolescents, older adults, and individuals from different cultural backgrounds—could enhance the generalizability of the findings. Employing mixed-method approaches that incorporate both qualitative and quantitative data may also provide a more comprehensive picture of the therapy's impact.

Psychotherapists can adopt schema mode therapy as an effective approach for treating personality disorders and emotional difficulties. Designing more comprehensive treatment protocols that specifically target the modification of maladaptive schemas and the enhancement of mature defense mechanisms can improve clinical outcomes. Moreover, training and empowering mental health professionals to effectively apply this approach in various clinical settings—especially counseling centers and psychological clinics—can enhance the overall quality of therapeutic services.

### Authors' Contributions

All authors significantly contributed to this study.

### Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

### Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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### Declaration of Interest

The authors report no conflict of interest.

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### Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the study and participated in the research with informed consent.

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