



# Effectiveness of Contextual Schema Therapy for Extreme Perfectionism and Emotion Regulation in Individuals with Perfectionism Disorder

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Received 2023 September 02; Revised 2023 October 04; Accepted 2023 October 15.

## Abstract

**Background:** Individuals are consistently influenced by ineffective core beliefs known as maladaptive schemas that develop during childhood and can pave the way for the appearance of problems such as extreme perfectionism. Therefore, therapeutic approaches are needed that can be effective for these schemas.

**Objectives:** The present study aimed to investigate the effectiveness of contextual schema therapy (CST) on perfectionism and emotion regulation in individuals with perfectionism disorder.

**Methods:** In this study, 12 individuals diagnosed with perfectionism disorder visiting the psychological service centers in Tehran in 2022 were purposively selected for this quasi-experimental study with a pre-test, mid-test, and post-test design. The participants underwent CST in 40 one-hour sessions and completed the Positive and Negative Perfectionism Scale and Emotion Regulation Questionnaire in all three stages of the assessment. The data were analyzed using the repeated measures analysis of variance (ANOVA) in SPSS-26.

**Results:** The mean and standard deviation (SD) of perfectionism in the pre-test, mid-test, and post-test phases were  $151.08 \pm 18.97$ ,  $94.25 \pm 12.48$ , and  $67.58 \pm 5.41$ , respectively. Moreover, the mean  $\pm$  SD of emotion regulation in the pre-test, mid-test, and post-test phases were  $40.25 \pm 8.95$ ,  $45.50 \pm 8.12$ , and  $50.08 \pm 7.94$ , respectively. The results demonstrated that the CST was effective for perfectionism across all assessment stages ( $P < 0.001$ ); however, this influence was not significant for emotion regulation during the mid-test stage.

**Conclusions:** Contextual schema therapy led to a reduction in extreme perfectionism and an improvement in emotion regulation in individuals with perfectionism. It is suggested that CST be applied in psychological service centers to reduce perfectionism and emotion regulation strategies in clients.

**Keywords:** Schema Therapy, Perfectionism, Emotions, Psychotherapy

## 1. Background

Perfectionism is a persistent inclination toward setting unattainably high standards and striving to achieve them (1). In another definition, perfectionism is characterized by a neurotic tendency towards striving for flawlessness, considering even the slightest personal mistake an unforgivable sin, and anxiously anticipating its ominous outcomes (2). Perfectionism encompasses destructive thoughts and behaviors driven by an intense desire to achieve unrealistically extreme goals and a longing for absolute flawlessness, which deprives the individual of contentment and tranquility, and subjects them to failures and disappointments (3). A

perfectionist individual tends to have irrational attitudes and thoughts, consequently pursuing unattainable goals and expectations of life (4). Perfectionism is marked by a set of excessively high standards, such as all-or-nothing thinking and relentless pursuit of flawlessness accompanied by excessive self-criticism, concerns about evaluation by others, and an emphasis on order and organization in performance (5).

Perfectionism entails the establishment of highly demanding standards and the relentless and excessive efforts required to meet them; despite the difficulties these attempts impose on the individual. Perfectionist individual evaluates their self-worth solely based on

the degree of adherence to and achievement of these standards (6). Perfectionism is the tendency towards setting exceptionally high standards, striving for flawlessness, and experiencing dissatisfaction due to perceived imperfections. In one classification, it is categorized into self-oriented, other-oriented, and socially prescribed perfectionism (7). In another classification, it is specified by dimensions such as positive, healthy, or adaptive perfectionism and negative, unhealthy, or maladaptive perfectionism (8). In this perspective, perfectionism encompasses a normal and an abnormal pole, and the inclination towards perfectionism can have both constructive and beneficial aspects and destructive and negative ones. Therefore, many studies have highlighted the necessity to differentiate these two dimensions of perfectionism (9). Maladaptive or pathological perfectionism refers to an individual's inclination toward possessing a set of extreme standards and focusing on failures and deficiencies in performance. This type of perfectionism can be involved in the development of many forms of physical and psychological damage (10).

It appears that emotions, emotion-focused coping techniques, and emotion regulation strategies are the factors that play a significant role in the development, intensification, and perpetuation of perfectionism (11). In this regard, emotions are the internal and external processes responsible for controlling, evaluating, and altering an individual's emotional responses in the pursuit of their goals (12). Any difficulties or deficiencies in emotion regulation can render an individual vulnerable to mental disorders (13). Research findings have demonstrated that perfectionism is associated with difficulties in emotion regulation, high levels of catastrophic thinking and rumination, and low levels of planning, reappraisal, and positive refocusing (14, 15). Cognitive emotion regulation is a form of self-regulation consisting of the processes through which individuals consciously and non-consciously modulate their emotions to respond to environmental expectations (16). Individuals utilize various strategies, divided into healthy and unhealthy types, to exert this influence. In this regard, maladaptive emotion regulation strategies are correlated with the pathological aspects of perfectionism, whereas, adaptive and positive strategies do not exhibit such a negative correlation (17).

Since emotions are a chain of automatic actions and, due to their emotional nature, lead to their underlying chain (that is, to emotional schemas), it is necessary to employ an approach focused on emotional schemas in order to correct maladaptive emotion regulation strategies and reduce extreme perfectionism (18).

According to Young et al.'s theory (19), schemas develop in childhood and serve as frameworks for processing subsequent experiences. Reflecting maladaptive schemas often gives rise to unconditional beliefs about oneself. Hemmati Sabet et al. (20) demonstrated that employing cognitive therapy techniques helped patients learn to argue against incompatible perfectionism schemas and question their validity on a logical level. Furthermore, research findings suggest that the schema-based approach is effective for emotion regulation (21, 22).

Studies based on interventions that enhance emotional self-regulation can be an effective step toward improving the physical and mental health of patients. At the same time, improving emotion regulation helps individuals to better cope with their mental health problems. However, most previous studies tested the effectiveness of this approach by relying on the traditional type of schema therapy (ST); in contrast, the present study attempts to test and determine the efficacy of CST, and is a type of integrative therapeutic approach that combines ST within the context and actual effects of third-wave therapies thus intertwining acceptance and commitment therapy throughout this approach. This approach exemplifies the versatility of ST in considering various perspectives in the same context.

## 2. Objectives

Accordingly, this study aimed to investigate the effectiveness of CST on perfectionism and emotion regulation in individuals with perfectionism disorder.

## 3. Methods

A quasi-experimental method was employed with a pre-test, mid-test, and post-test design. The statistical population consisted of individuals diagnosed with perfectionism disorder who visited the psychological service centers in Tehran in 2022. Twelve individuals with perfectionism were included in the study using G\*Power statistical software. The inclusion criteria for the study were consent to participate in the research, age between 20 and 40 years, diagnosis of perfectionism by a psychologist, and below-average scores in the emotion regulation questionnaire and above-average scores in the extreme perfectionism questionnaire. The exclusion criteria included unwillingness to remain in the research, absence for more than two sessions, simultaneous use of medications, and failure to answer more than 10% of the questions in the questionnaires. The experimental group underwent 40 sessions of 60 minutes of CST.

Participants completed the questionnaires in the pre-test, mid-test, and post-test stages. Before completing the questionnaires, the participants were prepared and justified. After ensuring ethical considerations, including obtaining informed consent, guaranteeing privacy and confidentiality, providing necessary explanations for questionnaire completion, and ensuring the voluntary nature of their participation, the participants proceeded to complete the research questionnaires.

### 3.1. Instruments

#### 3.1.1. Positive and Negative Perfectionism Scale

This scale was developed by Terry-Short et al. (23) to measure positive and negative perfectionism. It consists of 40 items, with 20 items measuring positive perfectionism and 20 items measuring negative perfectionism. Responses are given on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree." The possible total score ranges from a minimum of 40 to a maximum of 200. Scores between 20 and 67 indicate low levels of positive and negative perfectionism, scores between 67 and 134 show moderate levels of positive and negative perfectionism, and scores above 134 suggest high levels of positive and negative perfectionism. Cronbach's alpha coefficient for the scale was 0.79 (24).

#### 3.1.2. Emotion Regulation Questionnaire

This questionnaire was developed by Gross and John (25) to measure emotion regulation strategies. It consists of two subscales: Reappraisal with 6 items and Suppression with 4 items. Participants respond on a 7-point Likert scale ranging from "strongly disagree" (with a score of 1) to "strongly agree" (with a score of 7). The minimum and maximum scores obtainable on this questionnaire are 10 and 70, respectively. Higher scores indicate better emotional regulation (25). Cronbach's alpha coefficient for the questionnaire was 0.84 (26).

### 3.2. Contextual Schema Therapy (CST) Intervention Plan

The CST intervention plan was prepared based on the ST approach developed by Young et al. (19) and adapted by Roediger et al. (27). This intervention plan consisted of 10 steps, with each step spanning over 4 therapy sessions. The primary goal of the intervention was to reduce extreme perfectionism and enhance emotion regulation performance in the participants. The intervention sessions were conducted by the first author. The intervention sessions are briefly described in Table 1.

### 3.3. Statistical Analyses

The data was analyzed using SPSS-26. Descriptive statistical methods including mean, standard deviation, skewness, and kurtosis were employed to test the normal distribution of the data. Additionally, the inferential statistical test repeated measures analysis of variance (ANOVA) was used to compare the means.

## 4. Results

The participants in the present study were 12 individuals diagnosed with perfectionism disorder with an average age of  $28.16 \pm 6.78$  years. Eight (66.67%) of the participants were employed and 4 (33.33%) were unemployed. The descriptive findings for the variables of extreme perfectionism and emotion regulation are presented in Table 2.

In this section, before analyzing the data related to the research hypotheses, the assumptions of repeated measures ANOVA including the assumption of normal distribution of the scores and homogeneity of covariances were tested. The normality of the traits was examined using skewness and kurtosis tests. The results of these tests for assessing the normality of the scores for the extreme perfectionism and the emotion regulation variables are reported in Table 2. According to this table, if skewness and kurtosis are between -2 and +2, the data is considered to have a normal distribution. Therefore, the assumption of normal distribution of the scores of the variables in the studied population was confirmed.

Before conducting the repeated measures ANOVA, the result of Mauchly's assumption of sphericity for the homogeneity of the covariance matrix of the scores for the variables was provided. According to these results, Mauchly's statistic was significant for extreme perfectionism, which indicated a violation of the sphericity assumption. Therefore, epsilon corrections had to be applied. However, this statistic was not significant for the variable of emotion regulation.

According to the results in Table 3, the effects of the CST intervention on extreme perfectionism ( $F = 104.29$ ,  $P = 0.001$ ) and on emotion regulation ( $F = 3.88$ ,  $P = 0.036$ ) were significant.

The post-hoc LSD test was used to determine which of the pre-test, post-test, and follow-up stages exhibited significant differences. Based on the results in Table 4, there were significant differences between the pre-test and the mid-test ( $P = 0.001$ ), the pre-test and the post-test ( $P = 0.001$ ), and the mid-test and the post-test ( $P = 0.001$ ) in extreme perfectionism. However, the differences between the pre-test and the mid-test, and between the mid-test and

**Table 1.** Summary of Contextual Schema Therapy Sessions

Sessions	Content
<b>Sessions 1 to 4</b>	The teaching of the cognitive model; introduction of the self-help book; the six core processes of ACT
<b>Sessions 5 to 8</b>	The establishment of an equilibrium between the poles this axis; the vertical axis: Activation; self as process - self-realization; the vertical axis: Mentalization: Emotional deactivation, self-reflection, self as context
<b>Sessions 9 to 12</b>	Principles of limited reparenting: (For the formation of attachment system); the need for reparenting: Maintenance of emotional connection, validation, and unconditional acceptance; self-disclosure and therapist engagement (as a role model); assertiveness training
<b>Sessions 13 to 16</b>	Identification and labeling of coping mentalities: Observable case formulation; rejection of confrontational mentalities (avoidance and indifference) - access to the mentality of a child providing the necessary high energy source for the healthy mentality of an adult
<b>Sessions 17 to 20</b>	Identification of underlying core beliefs; reevaluation
<b>Sessions 21 to 24</b>	Identification of strength of healthy adult strengths (healthy adults are self-aware)
<b>Sessions 25 to 28</b>	Healthy adult feel self-compassion (they are guided by their personal values and takes effective actions in line with them)
<b>Sessions 29 to 32</b>	Emotional activation and integration of two perspectives; activation of the schema in the emotional memory; creation of an opportunity for the new and effective information to be connected with the activated schema; integration with the emotional memory
<b>Sessions 33 to 36</b>	Chair technique for diagnosis; historical role-playing
<b>Sessions 37 to 40</b>	Emotion regulation; encouragement of the clients to adopt pragmatism

**Table 2.** Mean and Standard Deviation of Perfectionism and Emotion Regulation in The Three Stages of Pre-test, Mid-test, and Post-test

Variables	Pre-test			Mid-test			Post-test		
	Mean ± SD	Skewness	Kurtosis	Mean ± SD	Skewness	Kurtosis	Mean ± SD	Skewness	Kurtosis
<b>Perfectionism</b>	151.08 ± 18.97	-0.49	-0.60	94.25 ± 12.48	-1.61	1.69	67.58 ± 5.41	-0.07	-0.85
<b>Emotion regulation</b>	40.25 ± 8.95	1.36	1.79	45.50 ± 8.12	-0.39	-0.42	50.08 ± 7.94	-0.81	-0.73

**Table 3.** Results of Repeated Measures Analysis of Variance to Investigate Within-Group Effects on Perfectionism and Emotion Regulation

Variables	SS	df	MS	F	P
<b>Perfectionism</b>	43653.56	1.33	32742.69	104.29	0.001
<b>Emotion regulation</b>	581.06	2	290.53	3.88	0.036

post-test were not significant in the emotion regulation variable, but a significant difference was observed between the pre-test and the post-test in this variable ( $P = 0.048$ ).

## 5. Discussion

This study aimed to investigate the effectiveness of CST on perfectionism and emotion regulation in individuals with perfectionism disorder. According to the results, the CST had a significant effect on perfectionism. In other words, the CST improved extreme perfectionism in individuals affected by it. The obtained results are consistent with the previous findings of Younesi et al. (28) and Mohammad Hosseini et al. (29). Younesi et al. (28) reported that group schema therapy was effective in reducing students' academic perfectionism. Moreover, Mohammad Hosseini et al. (29) reported that schema therapy can reduce perfectionism in women with anxiety. In explaining the results, it can be stated that it seems the presence of extreme perfectionism may stem from cognitive distortions due to the existence of maladaptive

schemas such as deficiency and shame, insufficient self-discipline, and rigid standards, which are more pronounced in individuals with extreme perfectionism. In the ST approach, the focus is on treating and modifying the initial maladaptive schemas, which can pave the way for the improvement of perfectionism in individuals. In other words, in ST, the schemas are enduring, constant, and specific themes often developed during childhood and under the influence of unmet or excessively met basic needs, and individuals try to adapt to life events and the environment through these schemas (28).

Schemas are perpetuated and reinforced through three mechanisms: Coping styles, self-defeating behavior patterns, and cognitive distortions (30). According to the schema theory, perfectionists have an interpersonal maladaptive schema that contributes to problematic emotional experiences. Consequently, an interpersonal maladaptive schema arises when criticism and rejection occur instead of receiving love and acceptance (31). Consistent with this finding, reference can be made to the study by Sohrabi et al. (32), which indicated

**Table 4.** LSD Post-hoc Test for Paired Comparison of the Body Image and Psychosomatic Symptoms Across Time Series

Variables	Phase A	Phase B	Mean Difference (A-B)	SE	P
Perfectionism	Pre-test	Mid-test	56.83	7.45	0.001
		Post-test	83.50	6.04	0.001
	Mid-test	Post-test	26.66	3.58	0.001
Emotion regulation	Pre-test	Mid-test	-5.25	2.79	0.086
		Post-test	-9.83	4.41	0.048
	Mid-test	Post-test	-4.58	3.20	0.180

that perfectionistic behaviors in individuals resulted from experiences of sadness, shame, and anger, led to a decrease in self-esteem in individuals due to lack of acceptance and approval, and ST could be effective in reducing perfectionistic tendencies. Roediger et al. (27) demonstrated that maladaptive schemas (perfectionism is one of the 18 maladaptive schemas proposed by Young) involved cognitive, emotional, motivational, and physical components, of which the cognitive component was the primary and central one. Schema therapy integrates four major therapeutic techniques (cognitive, behavioral, experiential, and interpersonal techniques) and utilizes them in the treatment process based on the therapeutic conditions. Through the application of cognitive techniques, patients learn to challenge schemas and question their validity on a logical level.

Based on the results, the effect of CST was also significant on the emotion regulation variable, but this effectiveness was observed only between the pre-test and post-test. The obtained results are consistent with the previous findings of Salgo et al. (22) and Talaeizadeh et al. (33). In explaining the results, it can be stated that the initial maladaptive incompatible schemas are interrelated with and accompanied by the cognitive dimensions of emotion regulation. The use of ineffective emotion regulation strategies in individuals who experienced childhood traumas and the cognitive content of these schemas justify this interrelation. The findings of the research by Salgo et al. (22) and Faustino and Vasco (34) support this claim. They demonstrated that in addition to the relationship between emotional schemas and emotion regulation, emotional schemas could play a broader role in psychological disorders. Deficits in emotion regulation strategies trigger the initial maladaptive schemas and lead to reduced quality of life and general well-being, increased depression, and higher trait anxiety. Salgo et al. (22) reported that difficulties in emotion regulation could lead to the perpetuation of insufficient maladaptive self-discipline schema. Furthermore, Mohammadkhani et al. (35) also

indicated that initial maladaptive schemas played a role in the development of psychological disorders through emotion regulation. Given the connection between schemas and emotion regulation strategies, CST appears to be a suitable option for treating individuals with deficits in emotion regulation or maladaptive emotion regulation strategies. This therapeutic approach can effectively improve emotional schemas and emotion regulation problems. This claim is consistent with the results of the research by Erfan et al. (36), which showed that ST reduced the score of some components of emotion regulation difficulties.

Regarding emotion regulation, it is noteworthy that cognitive strategies for emotion regulation are classified into two distinct groups: The first group includes more adaptive strategies such as focusing on planning and acceptance, positive focus, positive reappraisal, and perspective (viewpoint) growth, while the second group includes maladaptive strategies such as rumination, catastrophic thinking, self-blame, and other-blame (33). It seems that CST intervention initially leads to an improvement in maladaptive perfectionism, resulting in a reduction of maladaptive and incompatible emotion regulation tendencies such as self-blame, rumination, and catastrophic thinking. Subsequently, by substituting these maladaptive strategies with adaptive emotion regulation strategies such as acceptance, attention, and reappraisal, the use of positive emotion regulation strategies may improve. In general, emotion regulation acts as an important adaptive and protective factor during stress, chronic pain, and illness (27).

### 5.1. Limitations

Some of the limitations of the current study include the small sample size due to time and resource constraints, the absence of a control group, the lack of measuring treatment effectiveness based on the subscales of the studied variables, and the lack of measuring treatment effectiveness considering socio-demographic characteristics and individual differences of participants.

Therefore, considering these limitations, it is suggested that future research in this area use a larger sample size to enhance the generalizability of the results. Additionally, the use of a control group for controlling variables such as time that may contribute to some of the intervention-induced changes is recommended.

## 5.2. Conclusions

According to the findings of our study, CST led to an improvement in extreme perfectionism and emotion regulation in individuals with perfectionism. The findings of this study contribute to the development of psychological sciences, particularly in the field of therapeutic interventions. It is suggested that CST be applied in psychological service centers to improve perfectionism and emotion regulation strategies in clients.

## Footnotes

**Authors' Contribution:** M. S. and S. B.: Study concept and design, acquisition of data, analysis and interpretation of data, and statistical analysis; F. S. and Z. E. S.: Administrative, technical, and material support, study supervision; S. B., F. S., and P. A.: Critical revision of the manuscript for important intellectual content.

**Conflict of Interests:** The authors declare that they have no conflict of interest.

**Ethical Approval:** This study was approved under the ethical approval code of [IR.IAU.AHVZ.REC.1401.151](#).

**Funding/Support:** This research did not receive any grant from funding agencies in the public, commercial, or non-profit sectors.

**Informed Consent:** Informed consent was obtained.

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