



The Effectiveness of Paradoxical Time Table Technique on Negative Automatic Thoughts, Cognitive Avoidance and Fear of Evaluating Others in People with Social Anxiety Disorder

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Abstract

Background: Social anxiety disorder is a psychological disorder characterized by constant fear and avoidance of social situations due to fear of evaluation.

Objectives: The aim of the present study was to investigate the effectiveness of paradoxical time table technique on negative automatic thoughts, cognitive avoidance and fear of evaluating others in people with social anxiety disorder.

Methods: The current research method was semi-experimental with a pre-test and post-test design with a control group. The statistical population of the research included all people with social anxiety disorder (50 people) who referred to Derakhshan counseling center in Babolsar city in 2021. The sample included 30 patients who were purposefully selected and randomly divided into two experimental groups (15 people) and control group (15 people). To collect data, ATQ negative automatic thoughts questionnaire, Sexton & Dugas CAQ cognitive avoidance questionnaire and Watson & Friend fear evaluation questionnaire were used. Research data was analyzed using SPSS-23 software.

Results: The results of the analysis showed that the paradoxical timetable technique was significantly effective on negative automatic thoughts, cognitive avoidance and fear of evaluation by others ($P < 0.001$).

Conclusions: The results of this research can be used in the treatment of negative automatic thoughts, cognitive avoidance and fear of evaluation by others in people with social anxiety disorder.

Keywords: Paradoxical Time Table Technique, Negative Automatic Thoughts, Cognitive Avoidance, Fear of Evaluating Others

1. Background

Social anxiety disorder (SAD) is characterized by an excessive fear of negative evaluation and rejection by other people and a consistent fear of embarrassment or humiliation (1). According to the fifth edition of the diagnostic and statistical manual of mental disorders (DSM-5), social anxiety disorder is a severe and permanent fear of situations in which a person is in the company of others or has to do something in front of them (2). It should be noted in DSM-IV, the parenthetical "(social anxiety disorder)" was placed after social phobia in recognition of the fact that the field was beginning to prefer this alternative name. In DSM-5, however, the terms were flipped so that social phobia is the parenthetical term and social anxiety disorder the

primary term. It was decided in DSM-5-TR that the parenthetical "(social phobia)" provides no ongoing clinical utility since the field has completely adopted the term "Social Anxiety Disorder" (3). Social anxiety disorder is the third most common mental health disorder after depression and substance abuse, with lifetime prevalence rates of around 12% (4). Social anxiety can reduce a person's quality of life to a great extent (5) and, specifically, it has long-term effects on individual, family, and community functioning in different dimensions (6).

Social anxiety disorder is associated with profound negative consequences and high levels of impairment even when compared to other psychiatric disorders (7). People with social anxiety believe that other people pay attention to their anxiety symptoms and interpret these

symptoms in a negative way (8). These cognitive distortions that appear in different forms and when they activate the critical schema, they call a system of negative automatic thoughts (9). These negative automatic thoughts include sentences and phrases that occur quickly during consciousness and usually after an event (10). This thought is caused by the failure to respond to life stressors, which lead to a decrease in empathy and feelings of guilt in a person and affect people's emotional and behavioral responses (11). When a person's negative automatic thoughts are in a negative frame of mind, they come to mind involuntarily and automatically and are triggered by external and internal stimuli, and finally, emotional and stressful reactions will follow (12). The distinctive feature of negative automatic thoughts is that they pass through the mind quickly and there is no ability to control these thoughts at that moment (13). These negative automatic thoughts can be organized into basic attitudes of an internal cognitive schema that reduce distress into a cognitive avoidance structure that refers to getting rid of an action or a person or an object (14).

In the cognitive model of social anxiety disorder, it is assumed that one of the reasons why people suffer from social anxiety is avoidance behaviors. These avoidance behaviors lead to the maintenance of ineffective beliefs that are responsible for constant anxiety because they prevent the creation of an opportunity to reject this belief and the third dimension is the fear of negative evaluation (15). This fear of evaluation is one of the unique cognitive-behavioral characteristics of social anxiety disorder and it is characterized by the fear and worry of being embarrassed in society and then avoiding social situations (16). In defining the fear of negative evaluation, they emphasized on worrying about the evaluations of others, excessive agitation towards negative evaluations, avoiding evaluation situations and expecting to experience negative evaluations from others. Fear of negative evaluation is one of the important cognitive factors in social anxiety disorder. People with this disorder have negative beliefs about other people and social situations and think that people will evaluate them negatively.

Research shows that people with social anxiety disorder are significantly at increased risk of depression, suicide, drug use, severe social restrictions, dropping out of school, and low education (17). Also, social anxiety disorder is related to high levels of functional disorder in emotional, interpersonal, and quality of life, so that people with this disorder do not have a realistic assessment of themselves, the surrounding world, and the future, therefore the need

for effective therapeutic interventions is appropriate and necessary (18). It seems that in the discussion of psychotherapy, the use of integrated methods can have more effects (19). One of the most recent approaches is paradoxical schedule therapy, a method of treating psychological disorders that has overcome many of the aforementioned problems and limitations (2). In this way, when the symptoms of the disorder are artificially recreated, it presents the person with a new experience, that is, the symptoms can exist without the bitter taste of anxiety. When the behavior or symptom is without anxiety, it means that it is no longer a disease. In this way, the relationship between symptoms and anxiety is interrupted (20). Studies have shown that paradoxical treatment in the treatment of psychological disorders, including anxiety disorders, is an effective, short-term, economical treatment and has the lowest chance of disease recurrence. Also, the short duration of this treatment model can attract people who may abandon it halfway through other treatments due to the length of the treatment (21). Findings, evidence, and controlled clinical experiences show that the complete paradoxical timetable psychotherapy model is an effective and unique therapeutic approach that includes all the original characteristics (20, 22).

It seems that paradoxical treatment in the treatment of psychological disorders, including anxiety disorders, has been an effective, short-term, economical treatment and has the lowest chance of disease recurrence. The short duration of this treatment model can attract people who may abandon it halfway through other treatments due to the length of the treatment. Also, controlled clinical experiences show that the complete Paradoxical Time Table model of psychotherapy is an effective and unique therapeutic approach that includes all the original characteristics. Therefore, the results of this research can clarify the path of interventions for this disease and pave the way for more effective and durable treatments. In addition, due to the fact that timely interventions can be effective in the way of prevention and relapse of mental diseases, conducting research of this kind will be able to be useful in order to improve the quality level of related interventions. Also, from a practical point of view, the results of this research can provide useful information for doctors, clinical specialists, psychiatrists and even the patient himself.

2. Objectives

Therefore, according to the mentioned cases, the aim of the present study was to investigate the effectiveness of the paradoxical time table technique on negative self-

motivation, cognitive avoidance and fear of evaluation by others in people with social anxiety disorder.

3. Methods

The method of the current research was semi-experimental with a pre-test and post-test design with a control group. The statistical population of the research included all people with social anxiety disorder (50 people) who referred to Derakhshan counseling center in Babolsar city in 2021. The sample included 30 patients who were purposefully selected and randomly divided into two experimental groups (15 people) and control group (15 people). The method of selecting the sample was as follows: First, to select the sample, a call for holding social anxiety therapy classes among specialized counseling and therapy centers and the information channels of Derakhshan Counseling Center was posted and published. In the next step, among the people who were diagnosed with social anxiety disorder and had completed the informed consent form, 30 people were purposefully selected and randomly replaced in two experimental groups (15 people) and the control group (15 people). It should be noted that this number was adopted by relying on statistical experts. For example, Gall, Gall and Borg believe that the number of at least 15 people in each group is necessary in experimental research; Therefore, the number of 15 people was adopted for each group (23). The following tools were used to collect data:

3.1. Automatic Thoughts Questionnaire (ATQ)

This questionnaire was designed by Kendall and Hollon in 1980 and has 30 questions that are scored on a Likert scale from never (= 1) to always (= 5). The minimum possible score will be 30 and the maximum will be 150 (24). In a research reported the reliability of this tool using Cronbach's alpha of 0.97 (24). Kimiaei in a research, the internal consistency of this questionnaire is $\alpha = 0.091$ and has a standard deviation of 11.67 with an average of 28.46 (25). The reliability of this questionnaire in the present study using Cronbach's alpha was reported to be 0.81.

3.2. Sexton and Dugas Cognitive Avoidance Questionnaire

This questionnaire was created by Sexton and Dugas in 2004. The questionnaire has 25 questions and its purpose is to measure cognitive avoidance from different dimensions (substitution of positive thoughts instead of worrisome thoughts, withdrawal of worrisome thoughts and use of attention to interrupt the process of worry (distraction), avoidance of

situations and activities The activator of worrying thoughts is to change mental images to verbal thoughts. To get the points related to each dimension, add the total points of the questions related to that dimension together (26). To get the total score of the questionnaire, add the total scores of all the questions together. Based on this method of analysis, add up the obtained scores and then judge based on the table below. The minimum possible score will be 25 and the maximum will be 125. In a research, Sexton & Duga obtained the reliability coefficient of this scale using Cronbach's alpha method in all subjects for the total score of cognitive avoidance equal to 0.91 (26). In Mahmud Aliloo and et al. research, Cronbach's alpha coefficient of the cognitive avoidance questionnaire was 0.86 (27). It should be noted that the reliability of this questionnaire in the present study using Cronbach's alpha was reported to be 0.75.

3.3. Watson and Friend Evaluation Fear Questionnaire

Short version of the Fear of Evaluation Scale (BFNES), this scale was designed to measure social anxiety in 1969 by Watson & Friend and has 30 statements to evaluate one aspect of social anxiety, namely Fear of receiving judgment from others. The terms of this scale include symptoms of anxiety and social inefficiency, which may cause the behavior to be unaccepted by others. The fear of assessment questionnaire has a short version of 12 statements. The short version of this test includes statements from the main test that have a correlation of over 0.50 with the total score of the test. In this research, we used the short version of the fear of evaluation questionnaire (28). The way of scoring the options in the short version of the fear of negative evaluation questionnaire is as follows: I am not like this at all = 1 to I am like this strongly = 5. The minimum possible score will be 12 and the maximum will be 60. A higher score indicates a high fear of evaluation in a person, and a low score close to 12 indicates a low fear of evaluation by others. Watson & Friend reported the internal consistency of this scale using its Cronbach's alpha coefficient of 0.90 (28). Sohrabi reported the internal reliability of the fear of evaluation questionnaire based on Cronbach's alpha coefficient equal to 0.73 (29). The reliability of this questionnaire in the present study using Cronbach's alpha was reported to be 0.91.

3.4. Paradoxical Time Table Technique

For this method, Besharat Educational Therapy Package was used (21). The experimental group of this method consisted of 4 weekly sessions of 40 to 50 minutes, one session per week. In this treatment

method, the client specifies three times a day to think about those anxious thoughts. Usually, three times a day for ten minutes which these times do not change until the end of the treatment. The important thing is that the patient should avoid his negative feelings (guilt, guilty conscience, shame and embarrassment, being ridiculed, etc.) during the exercise). To experience and face it, the schedule makes the anxiety thoughts that were involuntarily and automatic to be done voluntarily, and performing voluntary behavior is in the power of the patient, who cannot do it like many voluntary behaviors. Exercise conditions: The therapist must write these factors on paper and give them to the patient: This exercise must be done at the appointed time, that is, if the therapist forgets or does not have time, the exercise will burn and he must do the next exercise. Don't do it again, even if it's a minute late. The second condition is that the clock doesn't start, he has to remember it. If he doesn't remember, it's okay to wait for the next practice. The third condition is that the more accurate and realistic the idea of these anxious thoughts is the better. Fourth condition: If he tries to imagine anxious thoughts for two minutes, he should stop practicing but try to do the practice. This may happen from the third week. The fifth condition: When the ten minutes are over, immediately get up from the exercise and do other things. Complete the course of treatment until the treatment is stabilized and the symptoms do not return, if it returns after some time, start the same exercise and steps again (21).

Table 1. Summary of Treatment Sessions with Paradoxical Timetable Technique

Sessions	Content of sessions
First session	Establishing a sincere relationship with clients, explaining the concept of social anxiety and getting familiar with the paradoxical timetable technique and specifying the general rules and setting treatment sessions, determining the hours of practice at home by the therapist and clarifying the conditions and number of practice. Setting up and starting the treatment in the form of paradox exercise in the times determined by the therapist.
Second session	Examining the exercises that the therapist did at home and removing one time from the three training times, performing the exercise in two times.
Third session	Reviewing the home workout and removing the second time from the workout, doing the workout at the same time.
Fourth session	Examining the practice of home practice and eliminating the third time of practice.
The fifth session	Reviewing and summarizing the paradoxical time table technique and providing recommendations for not returning anxiety symptoms, evaluating anxiety behavior change, appreciation and thanks for announcing the end of the session.

As can be seen in Table 1, a summary of the treatment sessions with the paradoxical timetable technique is mentioned.

4. Results

In this research, descriptive statistics methods such as mean and standard deviation were used and the Kolmogorov Smirnov test was used to check the normality of the distribution, as well as to check the assumption of homogeneity of variances using the Levine and Box test and to analyze the data using multivariate variance (MANCOVA) and SPSS version 23 software were used. Also, a significance level of 0.05 was considered.

The Kolmogorov Smirnov test was used to check the normality of the distribution. According to the results of the significance levels obtained for each of the research variables were greater than 0.05 ($P > 0.05$), the data of all variables are normal, and therefore parametric test was used to test each of the variables with a normal distribution.

To check the homogeneity of the variance of the research variables, Levene's test of equality of variances was used. Considering that the obtained significance level was greater than 0.05 ($P > 0.05$), therefore the condition of homogeneity of variance is established. Also, the result of Mbox test showed that the obtained probability value of each research variable was greater than 0.05 ($P < 0.05$). Therefore, according to this assumption, the analyst can use Wilks' Lambda.

The results of the Wilks Lambda test showed that the effectiveness of the paradoxical time table technique on at least one of the variables is significant ($P < 0.001$, Wilks' lambda = 0.11). Therefore, the condition of using multivariate analysis of variance (MANCOVA) has been met and the researcher can perform the test.

Table 2. Pre-test and Post-test Mean and Standard Deviation of Negative Automatic Thoughts, Cognitive Avoidance and Fear of Evaluating Others in two Groups

Variables	Experimental	Control Group
Negative automatic thoughts		
Pre-test	117.000 ± 10.845	116.933 ± 11.019
Post-test	34.066 ± 4.273	118.130 ± 11.255
Cognitive avoidance		
Pre-test	92.066 ± 8.258	92.133 ± 8.813
Post-test	66.000 ± 5.417	94.266 ± 8.694
Fear of evaluating others		
Pre-test	42.860 ± 7.461	42.800 ± 7.191
Post-test	14.800 ± 3.231	44.600 ± 7.562

^a Values are expressed as Mean ± SD.

As can be seen in Table 2, in all variables, negative automatic thoughts, cognitive avoidance, and fear of evaluation by others in children in the pre-test and post-test in the experimental group are different from each other.

Table 3. Results of Multivariate Covariance Analysis on Negative Automatic Thoughts, Cognitive Avoidance and Fear of Evaluating

Dependent Variable	Type III Sum of Squares	df	Mean Square	F	P	Partial Eta Squared
Negative automatic thoughts	51538.759	2	25569	8024.338	0.001	0.89
Cognitive avoidance	28145.934	2	14072.967	0.2899.819	0.001	0.90
Fear of evaluating others	6655.309	2	3327.665	1523.68	0.001	0.91

According to the results of [Table 3](#), considering the pre-test scores as variance scores, the difference between all variables, negative spontaneous thoughts, cognitive avoidance, and fear of evaluation by others in the two experimental and control groups is significant ($P < 0.05$).

5. Discussion

The aim of the present study was to investigate the effectiveness of the paradoxical time table technique on negative automatic thoughts, cognitive avoidance and fear of evaluation by others in people with social anxiety disorder.

Based on the first finding of this research, it was found that the paradoxical time table technique has a negative effect on spontaneous work; this finding is in line with the results of Nikan et al (30); Dehaqin et al (31). Nikan et al. (30) found in a study that the paradoxical schedule reduced the symptoms of worry and rumination in people with social anxiety disorder, and these effects were maintained with stability and effectiveness after the follow-up period. Kord and Mohammadi found in a research that there is a positive and significant relationship between the variables of difficulty in regulation and negative self-thoughts with students' social anxiety (32).

It seems that people with social anxiety have negative and self-inflicted thoughts; they may come to them many times even all day and night and make the person suffer. Based on the paradoxical time table technique, the client must reconstruct these thoughts and symptoms that he is suffering from and for the same reason he referred. That is, the client sees in his visualizations that he has been mocked by others and is evaluated and judged on issues that are important to him and are sensitive to him. In this technique, the client is asked to think three times a day about the same negative thoughts that caused his torment in the worst possible way. Adding a schedule to this technique makes those negative thoughts available to the clients

themselves (8). There are two logics in this technique. First, we direct these negative thoughts in such a way that instead of fifty times a day, for example, they cross his mind three times and the frequency gradually decreases. The second logic is that thoughts should be trained in such a way that they no longer come to the mind in an unpleasant and uninvited form, but the referent of those thoughts calls and takes control of these thoughts (22). In this method, the patient tries to distance himself from the symptoms and free himself from these irritations. So, if the patient faces those symptoms without fear, we will witness the disappearance of the symptoms (21). Therefore, it can be said that in order to train the efficiency and effectiveness of the paradoxical time table technique, in addition to the important and significant points mentioned in the hypotheses, the most important effect of the paradoxical time table technique is that it reduces the patient's anxiety in the first two or three exercises of and a person who does not have anxiety will automatically and over time, the symptoms of his disease will first decrease and disappear with the continuation of the treatment and disappear completely. Paradoxical Time Table Therapy technique is very simple for both therapist and client. Treatment with this method is very ethical, short-term, economical and non-invasive; this treatment reduces the use of psychiatric drugs and leaves the least chance for the disease to return (22).

Based on another finding of this research, it was found that the paradoxical time table technique was effective on the cognitive avoidance of people with social anxiety disorder, this finding is in line with the results of Ahmadi et al. (33) and Ghadimi Nouran et al. (34).

People with cognitive avoidance, whose lipid weakness is one of their characteristics, and in other words, they have low mental energy, often tend towards monotony and stillness, for this reason, they do not welcome new emotional experiences, and due to weakness in their skills emotionally and interpersonally, they are afraid of crowds and avoid them. In the paradoxical time table technique, in addition to the explanation of the first hypothesis, the therapist is encouraged to do exactly the things he is afraid of and to stop avoiding them, because these thoughts are painful for the therapist and when they come to his mind, he rejects it half way, and these thoughts are gone and come back stronger, for the same reason, the therapist tries to bring the client to a stage where he no longer avoids these thoughts and takes them head on. This contradiction (doing what he is afraid of), creates a

change in the client's perception of the symptoms and increases the client's awareness and enables him to distance himself from the symptom of the disease. Therefore, the goal of the therapist is to bring the clients to a point where they stop running away and, on the contrary, exaggerate them, as a result, the symptoms disappear and the client is no longer involved with them (21). In this technique, the client intentionally and voluntarily performs a behavior or gives an answer that is anxiety-inducing and worrying. The paradox is that he usually cannot do what he is afraid of on purpose (22). Paradoxical time table therapy has the most important effect of eliminating the patient's anxiety in the first two or three exercises, and a person who does not have anxiety will have his symptoms disappear by himself (21). According to the stated scientific justifications, since the treatment is carried out by the patient, without the presence of a therapist or a family member as an observer. For this reason, the patient is responsible for his own treatment. In addition to that, the therapist prescribes a behavior that caused the client suffering and for which he sought treatment, and this balance can put him at ease in the very first session. The most effective point in the treatment with the paradox method is the reduction of the patient's anxiety in the first days, as well as the voluntaryization of the patient's involuntary behavior at the end of the treatment. This treatment is so simple that if the symptoms of the disease return after many years, the patient can repeat the same prescription alone without the help of a therapist and get the previous result.

Based on the last finding of this research, it was found that the paradoxical time table technique is effective in people with social anxiety disorder. This finding is consistent with the results of the researches of Babaie (35) and Nikan et al. (30). These researchers showed in their research that the paradox technique is more effective and more effective than other techniques in treating social anxiety disorder problems. People with social anxiety disorder experience fear of evaluation by others, low self-confidence and lack of personal and social competence. Paradox technique is a process by which the patient is encouraged to do exactly the things that cause anxiety and are afraid of them. In this case, if the patient does not fear the symptoms and does not run away, on the contrary, he welcomes them, we will witness the disappearance of the symptoms.

Therefore, it can be said that the paradoxical technique of the timetable is based on the mechanisms of artificialization and grammar, breaking the relationship between anxiety and the symptom of the disease, changing the meaning of the symptom. In

artificialization, thoughts appear very real and natural to the patient, and they do not seem unrealistic and artificial at all, but they are just as annoying. According to the Paradoxical Time Table method, during the hours when these thoughts do not attack the therapist, he performs the exercises, which is why it does not seem real, and the waiting for the next exercise increases the artificiality. In programming, the client thinks about the therapist's prescription for their anxiety-provoking thoughts at predetermined times, not automatically. In other words, according to the therapist's instructions, the client thinks about his anxiety-provoking thoughts that are not real (22). The client is anxious about these thoughts, but it is unreality without anxiety, so the person realizes how delusional his thoughts are and does not have the bitter taste of reality. The third level is changing the sign's meaning; This mechanism that works at the cognitive level of the person and changes the meaning of the symptoms of the disease. The second change in the meaning of the sign is that, the client tells himself, I have unpleasant thoughts that are painful and unpleasant. Now the therapist prescribes these same unpleasant thoughts and with this prescription, the symptoms no longer have an unpleasant and annoying meaning and these pathological thoughts no longer become unpleasant and appear normal, so it is clear that a form of normalization takes place. So, it can be concluded that this change of thoughts causes the therapist to know about his thoughts, feelings and bad behavior and as a result to correct them.

It seems that in the treatment of the paradoxical timetable technique, the prescribed tasks are all subject to the principles that minimize the anxiety of the patient and maximize the possibility of his compliance with the treatment. My strength is the main goal of psychotherapy using the paradoxical time table technique. The realization and strength and authority of me predict the stability and stability of therapeutic changes and the sharp reduction in the return rate of disease symptoms in the psychotherapy of the paradoxical timetable technique. The psychotherapy model of the Paradoxical Time Table technique is not only very short-term and quick-acting, but the Paradoxical Time Table technique of psychotherapy is very simple; Both for therapists and patients. The exclusive simplicity of the paradoxical timetable technique approach and its techniques is one of the strengths of this model. The simplicity of the Paradoxical Time Table technique treatment model allows the patient to become a therapist at the end of the treatment period

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Footnotes

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Data Availability: The dataset presented in the study is available on request from the corresponding author during submission or after publication.

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