

Cognitive-behavioral training on the level of fear and anxiety caused by Corona and practical obsessive-compulsive disorder of housewives in the condition of covid-19 diseaseNasrin Bigdlo*¹**Abstract:**

Introduction: Corona anxiety is the stress caused by the fear of contracting the corona virus, which is mostly due to the vagueness of the disease. This research was conducted with the aim of investigating the effectiveness of cognitive-behavioral training on the level of fear and anxiety caused by Corona and practical obsessive-compulsive disorder of housewives in the condition of covid-19 disease.

Research method: This is a semi-experimental study with two experimental and control groups, and the statistical population of the study includes all housewives between the ages of 25 and 50 who met the conditions to enter the study. According to the research method, 30 people were randomly selected and divided into two experimental and control groups (15 people for each group). Data collection was done by questionnaires of fear and anxiety caused by Corona and practical obsessive-compulsive disorder, and the intervention was done by schema therapy protocol. Also, the statistical method of multivariate covariance analysis (MANCOVA) was used to analyze the data.

Findings: The results indicated that there was a significant difference between the total score and the subscales of the two questionnaires of fear and anxiety caused by Corona and obsessive-compulsive disorder in the pre-test and post-test in the experimental and control groups in housewives.

Conclusion: Based on the findings, it can be concluded that cognitive behavioral training has had an impact on all dependent variables, and its greatest impact has been on the variable of practical obsession and has reduced practical obsession.

Keywords: cognitive-behavioral, fear and anxiety caused by Corona, obsession, practical obsessive-compulsive disorder

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¹ - Master of Clinical Psychology, Islamic Azad University, Tehran West Branch, Tehran, Iran (corresponding author), nasrinuniteh76@gmail.com



Introduction:

Infectious diseases that is, epidemic diseases such as smallpox, AIDS, influenza and Ebola originate from unknown factors that cause many complications for humans which can cause physical and psychological as well as cultural and social complications. Behavioral changes, such as transmitting information away from human populations, such as home quarantine, being away from populations and participating in antiviral treatments, have been effective to a large extent in different countries, although these changes are effective on physical health, but in general, they could not have the effects to eliminate the mental illness and even some solutions such as long-term quarantine alone have psychological consequences such as post-traumatic stress, confusion, aggression, hopelessness, exhaustion, financial failures, and labeling for people (1). This virus has faced a big challenge due to its ability to transmit quickly and also its invisibility. Researchers have found that psychological disorders such as panic, anxiety, depression, fear, denial and despair are the main traumatic psychological reactions in most of the injured people and people exposed to disease outbreaks (2). In the era of corona disease, susceptible people become extremely anxious, so that these people experience anxiety and fear throughout the day and in different situations, and it disrupts the positive efficiency of their lives and causes widespread changes in sleep and appetite. It also causes mood swings. In fact, the pressure and stress caused by the Covid-19 virus has caused people who have the background to become obsessed with practicality. Cleaning takes place to the point where it becomes extreme and disrupts their normal life (3). Fear is the defense mechanisms of people that help them in dangerous situations to give necessary and fundamental reactions to threatening situations. However, the lack of appropriateness between the level of fear and current conditions causes various psychological disorders such as practical obsession, panic, depression and anxiety (3). One of the most common and debilitating mental disorders is obsessive-compulsive disorder, which is one of the treatment-resistant disorders in psychology and was separated from anxiety disorders in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders.

Obsessions include thoughts or repetitive compulsions that a person consciously carries out, which increases anxiety in a person, although doing compulsive actions along with obsessions is an attempt to reduce anxiety, but always to reduce it. Anxiety does not lead (2).

Anxiety is an unpleasant and vague feeling with fear and anxiety that has an unknown source and causes physiological arousal (4). Corona anxiety is the stress caused by the fear of contracting the corona virus, which is mostly due to the vagueness of the disease. Since this disease has widely increased mortality, it has a significant potential for negative effects on mental health, especially in people with psychological disorders (5).

Considering the wide range of human problems, one of the effective training methods that play an important role in regulating psychological characteristics is cognitive-behavioral training. In cognitive behavioral therapy (CBT), people are trained in revising and evaluating negative thoughts. The therapist encourages his clients to examine their thinking and negative hypotheses through behavioral exercises (6). This method of therapy is less focused on the person's past and emphasizes more on finding the meaning, purpose and future of the person

(7). The basic premise of the cognitive-behavioral approach is that cognition affects emotion and behavior, and more than the events themselves, people respond to their cognitive representation of events (6). Therefore, with these interpretations, the question that this research seeks to answer is whether cognitive behavioral training is effective in reducing the amount of fear and anxiety caused by coronavirus and obsessive compulsive disorder.

Research method:

This research is a semi-experimental or semi-experimental study with a pre-test-post-test design with a control group in terms of its practical purpose and in terms of the nature of the implementation and the way of collecting information. The research population includes all housewives between the ages of 25 and 50 who do not have a history of depression and anxiety. In order to determine the sample size according to the statistical population, 90 people who met the entry and exit criteria were selected from among the housewives who were affected by the Covid-19 disease in the period of April to June 1401, and the fear questionnaire. Anxiety caused by Corona and Obsessive-Compulsive Disorder was distributed among people. 30 people who scored equal to or higher than the cutoff score in the questionnaires were randomly selected and replaced in two experimental (15 people) and control (15 people) groups. Then, Parkman's cognitive behavioral therapy training program was implemented for the experimental group during 9 90-minute sessions by a trained researcher, and during this period, the control group did not receive any intervention. After the end of the educational program, the questionnaires were administered again for both groups as a post-test. SPSS software version 26 is used to analyze the data of this research. Descriptive (mean, standard deviation, skewness and kurtosis) and inferential statistical methods (Shapiro and Wilk test, multivariate covariance analysis) were used. The following tools were used in the study:

Corona Anxiety Scale: This tool has been prepared and validated to measure anxiety caused by the spread of the Corona virus in Iran. The final version of this tool has 18 items and 2 components (factors). Items 1 to 9 measure psychological symptoms and items 10 to 18 measure physical symptoms. This tool is scored on a 4-point Likert scale (never = 0, sometimes = 1, most of the time = 2, and always = 3); Therefore, the highest and lowest scores obtained by respondents in this questionnaire are between 0 and 54. High scores in this questionnaire indicate a higher level of anxiety in people. The reliability of this tool was obtained using Cronbach's alpha method for the first factor ($\alpha=0.879$), the second factor ($\alpha=0.861$) and for the whole questionnaire ($\alpha=0.919$). Also, Gottman's $\lambda-2$ value was obtained for the first factor ($\lambda-2=0.882$), the second factor ($\lambda-2=0.864$) and for the whole questionnaire ($\lambda-2=0.922$). In order to check the validity of the correlation with the criteria of this questionnaire, it was used to correlate this tool with the GHQ-28 questionnaire, and the results showed that the Corona anxiety questionnaire with the total score of the GHQ-28 questionnaire and the anxiety component, physical symptoms, impairment in social functioning and depression respectively It is equal to 0.483, 0.507, 0.418, 0.333 and 0.269 and all these coefficients were significant at the 0.01 level.

Mosley's Practical Obsession: This questionnaire was prepared by Hodgson and Rachman (1977) for the purpose of research on the type and scope of obsessive problems. The

implementation of this questionnaire is very quick and easy. Because there are 30 statements whose answers are true or false (8). This questionnaire contains 30 items, half with correct key and half with incorrect key. This questionnaire contains 30 items, half with correct key and half with incorrect key. This questionnaire has two options, a general score, and several separate scores for control, washing, slowness/repetition, and doubt. Rachman and in the initial validation at Maudsley Hospital, 50 obsessive-compulsive patients were not well differentiated from 50 psychiatric treatments. has done. Subsequent content analysis of 100 patients' responses identified four major components that reflected four types of obsessive-compulsive disorder in patients. These four components are: inspection, cleanliness, slowness and obsessive doubt. Of course, there was a fifth component that could be called rumination, but this component was only weighted on two items. Therefore, based on the analysis of the mentioned cases, four subscales were formed. By using a simple scoring method, you can get a general obsessional score and four sub-scores. The designers of this test have prepared a correction key for this questionnaire. If the person's answers are consistent with the correction key, the subject will receive one mark in that subject, and if the person's answer is not consistent with the key, the person's score in those subjects will be zero. The maximum score of the subject in the scales of this questionnaire are:

- 1- The total score of obsessions is maximum 30
- 2- The maximum score of the verification scale is 9
- 3- Maximum washing scale score is 11
- 4- Slow repetition scale score of maximum 7
- 5- Points of doubt-conscientiousness scale maximum 7

The reliability and validity of the Maudsley Obsession Test has been confirmed in studies conducted on clinical samples from different countries. For example, Sanavio obtained a correlation of 0.70 between Madsley and Padua total test scores. The reliability coefficient calculated between test-retest was high (0.89) (9). And in two studies in Iran, the average of this test for obsessive-compulsive patients was 15.75 (standard deviation 5.63) and 14.67 (standard deviation 5.76) (10) Correlation between the total scores of the Madsley test and the Padua test reported 0.70 and the calculated reliability coefficient between test and retest was 0.89. Andoz, Sahibi and Tabatabai (11) reported the reliability coefficient of the whole test as 0.72.

Table 1: The implementation process of cognitive behavioral therapy training

Session	Treatment process
First session	Getting to know the members and specifying the rules and providing a preface of the importance and necessity of cognitive-behavioral approach training.
second session	Talking about the fear of negative evaluation and emotional maturity and presenting thought patterns, emotional state and behaviors and finally relaxation exercises are also done.
Third session	Explaining the relationship between thoughts, emotions and bodily sensations and presenting numerous examples in different situations, explaining thinking errors

and negative spontaneous thoughts, describing the nature of stress, presenting the three important components of anxiety and stress (physical, cognitive, behavioral) and the interaction between these three components.

Fourth session	Introducing and identifying the types of common negative thoughts and cognitive distortions, investigating the awareness of the impact of pleasant and unpleasant events on feelings, thoughts and bodily sensations, real exposure and role-playing, teaching calmness
Fifth Session	Emphasis on replacing rational thoughts with illogical thoughts and relaxation
sixth session	Training, practicing and implementing effective coping strategies, dealing with interpersonal triggers, teaching communication skills and self-expression, physical relaxation training, active responsibility, sitting meditation (presence of mind from sounds and thoughts), assigning tasks for the next week, distribution Pamphlets.
Seventh session	Continuous training, practice and implementation of effective coping strategies, anger management training, sleep hygiene
Eighth Session	Teaching expressiveness without violating the rights of others and using different methods to communicate and identify interpersonal style
Ninth session	Teaching the importance and understanding the benefits of social support and an overview of the program

Findings:

Variable scores of corona anxiety in two groups in the experiment and the control group in the pre-test and post-test stages are given in Table 2.

Table2: Descriptive indices of variable scores of Corona anxiety in experimental and control groups in pre-test and post-test

Variable	Group	Pre-test				Post-test			
		Mean	standard deviation	skewness	Elongation	Mean	standard deviation	skewness	Elongation
Examination	Psychiatric symptoms	23.13	2.232	-0.815	-1.106	12.93	1.710	-0.772	0.440
Control		23.33	1.839	-0.250	-0.823	21.53	2.850	-0.734	0.251
Examination	Physical symptoms	19.33	1.543	-0.513	-0.375	10.27	1.944	0.979	1.567
Control		21.80	2.145	-1.155	0.588	19.33	3.337	-0.728	-0.433
Examination	Corona anxiety	42.47	3.314	-0.339	-1.609	23.33	3.155	0.071	-0.814
Control		45.13	3.852	-0.852	-0.123	41.60	6.685	-0.908	0.446

In Table 3, the variable scores of obsessive-compulsive symptoms of Corona in the experimental and control groups are described in the pre-test and post-test.

Table 3: Descriptive indices of variable scores of Corona anxiety in the experimental and control groups in the pre-test and post-test

Variable	Group	Pre-test				Post-test			
		Mean	standard deviation	skewness	Elongation	Mean	standard deviation	skewness	Elongation
Examination	Verification	8.13	0.640	-0.103	-0.127	1.73	0.799	0.555	-1.132
Control		8.13	0.640	0.103	-0.127	8.13	0.640	0.103	-0.127
Examination	Wash	8.53	1.87	0.795	-0.304	1.80	0.676	0.256	-0.505
Control		8.80	0.941	-0.142	-0.849	8.53	0.990	-0.360	-0.753
Examination	slow	5.60	0.828	0.070	-0.224	1.60	0.737	0.841	-0.470
Control	repetition	5.67	0.976	0.256	-1.131	5.60	0.828	0.070	-0.224
Examination	Hesitation	5.60	0.507	-0.455	-1.094	1.60	1.056	1.640	0.173
Control	Conscientiousness	5.53	0.516	-0.149	-1.308	5.67	0.488	-0.788	-1.615
Examination	Obsessive-practical	24.67	2.193	1.007	-0.388	6.40	2.298	-0.199	-1.008
Control		24.93	2.017	0.466	-1.086	24.47	1.922	0.685	-0.418

According to this table, there is a difference between the pre-test and post-test scores in the experimental group in the total score of the Corona anxiety variable. Also, in this table, the amount of skewness and elongation of the data can be seen that the skewness and elongation of all components are within the range of (2 to -2), so it can be said that the data has a normal distribution.

Table 4. Skewness and skewness of the data and the assumption of normality of the variables in the experimental and control groups

Variable	test	Pre-test		Post-test	
		skewness	Elongation	skewness	Elongation
Examination	Psychiatric symptoms	-0.815	-1.106	-0.772	0.440
Control		-0.250	-0.823	-0.734	0.251
Examination	Physical symptoms	-0.513	-0.375	0.979	1.567
Control		-1.155	0.588	-0.728	-0.443
Examination	Corona anxiety	-0.339	-1.609	0.071	-0.814
Control		-0.852	-0.123	-0.908	0.446
Examination	Verification	-0.103	-0.127	0.555	-1.132
Control		0.103	-0.127	0.103	-0.127
Examination	Wash	0.795	-0.304	0.256	-0.505

Control		-0.142	-0.849	-0.360	-0.753
Examination	slow repetition	0.070	-0.224	0.841	-0.470
Control		0.256	-1.131	0.070	-0.224
Examination	Hesitation -	-0.455	-1.094	1.640	0.173
Control	Conscientiousness	-0.149	-1.308	-0.788	-1.615
Examination	Obsessive-practical	1.007	-0.388	-0.199	-1.008
Control		0.466	-1.086	0.685	-0.418

The above table shows the normality of the skewness and skewness of the variables. After checking the normality of the skewness or the skewness of the data distribution, we go to the Shapiro-Wilk test to make sure that the data is normal in this research.

Table 5. The results of the Shapiro-Wilk test on the normality of the data in the experimental group

Variable	test	Shapiro-Wilk		
		statistics	Degrees of freedom	of meaningful
Examination	Psychiatric symptoms	0.779	15	0.201
Control		0.992	15	0.209
Examination	Physical symptoms	0.880	15	0.476
Control		0.933	15	0.299
Examination	Corona anxiety	0.867	15	0.305
Control		0.986	15	0.826
Examination	Verification	0.790	15	0.765
Control		0.783	15	0.240
Examination	Wash	0.836	15	0.109
Control		0.801	15	0.785
Examination	slow repetition	0.883	15	0.502
Control		0.755	15	0.350
Examination	Hesitation -	0.630	15	0.078
Control	Conscientiousness	0.597	15	0.980
Examination	Obsessive-practical	0.811	15	0.515
Control		0.908	15	0.128

According to the results obtained in Table 5 and the level of significance that is more than 0.05, it is possible to assume that the data obtained from the variables of corona anxiety in the experimental group are normal with high confidence. As a result, our null hypothesis is not rejected and parametric statistical models can be used. The research hypothesis of cognitive behavioral training is effective on the amount of fear and anxiety caused by corona and practical obsessive-compulsive disorder of housewives in the condition of covid-19 disease.

Table 6. The results of the Mbox test to check the homogeneity of the covariance matrix of the components of the Corona Anxiety Questionnaire

BOX S M	F	Degree of freedom 1	Degree of freedom 2	Degree of freedom 3
9.563	2.941	3	141120.000	0.318

According to Table 6, the level of significance is greater than 0.05, which indicates that the homogeneity condition of the covariance matrix has been well met for the components of the Corona Anxiety Questionnaire ($F = 3.571$ and $p \leq 0.05$), which means that the covariance matrices observed between different groups are equal.

Table 7. Multivariate covariance results on the post-test scores of dependent variable components with pre-test control.

Test	Value	F	The degree of freedom of hypothesis	Error degree of freedom	Significance level
Pillai effect	0.982	696.762	2	25	0.001
Wilks	0.018	696.762	2	25	0.001
Lambda					
Hotelling's work	55.741	696.762	2	25	0.001
The biggest root of error	55/741	696.762	2	25	0.001

According to Table 8, with the pre-test control, the significance levels of all tests are less than 0.05 and it indicates that there is a significant difference between the test and control groups in at least one of the dependent variables, and it means that cognitive behavioral training has an effect on the level of fear. And the anxiety caused by Corona and the intellectual and practical obsession of housewives has an effect in the conditions of the disease of Covid-19.

Table 8. Post-test covariance analysis of dependent variable components by removing the pre-test effect.

The dependent variables	Source of changes	sum of squares	of Degrees of freedom	average of squares	The amount of F	Significance level	Effect size
Corona anxiety	group	1818.650	1	1818.650	73.346	0.001/000	0.338
	error	644.638	26	24.796			
Practical obsession	group	2127.842	1	2127.842	1300.634	0.001	0.480
	error	42.536	26	42.536			

Considering the amount of F and the level of significance in the above table, which is less than 0.05, the null hypothesis is rejected. That is, there is a significant difference between the average scores of the variables of practical obsession and anxiety caused by Corona in the two experimental and control groups in the post-test. Also, by examining the table of descriptive statistics and comparing the average scores of the variables of practical obsession and anxiety caused by Corona in the two groups It can be concluded that cognitive-behavioral training is effective to a great extent on the level of fear and anxiety caused by Corona and practical obsessive-compulsive disorder of housewives in the conditions of covid-19 disease. Also, by emphasizing the size of the effect, it can be seen that cognitive behavioral training has an effect on the amount of fear and anxiety caused by Corona and practical obsessive-compulsive disorder of housewives in the condition of covid-19 disease and the practical obsessive-compulsive disorder of housewives in the condition of covid-19 disease. According to the effect size, the effect size for fear and anxiety caused by Corona is 0.338 and for practical obsession it is 0.480. In fact, it can be concluded that cognitive-behavioral training had an effect on all dependent variables, and its greatest effect was on the variable of practical obsession, and it reduced practical obsession.

Discussion and conclusion:

According to the obtained results, the main hypothesis, cognitive behavioral training is effective on the amount of fear and anxiety caused by Corona and practical obsessive-compulsive disorder of housewives in the condition of covid-19 disease, was confirmed and the results indicate that in There is a significant difference between the average scores of anxiety variable caused by Corona and practical obsessive-compulsive disorder of housewives in the condition of covid-19 disease of two groups in the post-test, and the educational program has reduced anxiety caused by Corona and has the greatest effect on the variable of practical obsessive-compulsive disorder. These results are in line with the research findings of Taghvi Karamalki and Moheb (12), Bagheri and Sadeghi (13), Shushtri, Rezaei and Taheri (14) and Wakefield and colleagues (15). In explaining the results of this research, it can be said that cognitive behavioral therapy causes a change in people's beliefs and attitudes, so that the person discards ineffective attitudes and beliefs and replaces them with efficient and logical beliefs, in other words, the approach of cognitive behavioral therapy compared to treatments Another cognition, in a deep way, can make a person feel better about himself and the surrounding

world by correcting his attitude and beliefs, because it changes and corrects his beliefs and thinking patterns and reduces the level of anxiety in a person. And this reduction of anxiety can also reduce a person's compulsive behaviors. In fact, the cognitive behavioral approach is the most effective approach in reducing the symptoms of the disease, which is effective through reducing anxiety and improving relationships with others, increasing self-esteem and generally improving the quality of life during the corona epidemic (13).

This approach may be especially beneficial for people who believe that they cannot control environmental risks, in other words, they have extremely negative beliefs about the effectiveness of control and management on re-tending to addiction disease, so one of the mechanisms Cognitive behavioral therapy is a change of belief and attitude in people, so that a person discards ineffective attitudes and beliefs and replaces them with efficient and logical beliefs. Attitudes and beliefs make a person feel better about himself and the surrounding world because it changes and corrects beliefs and thinking patterns in a person, so according to these explanations, it can be said that cognitive behavioral therapy can reduce the symptoms of anxiety caused by the disease. Corona is very effective and reduces the anxiety and behaviors caused by it such as obsessive behaviors in the person. In fact, the cognitive behavioral approach is the most effective approach in reducing psychological problems.

Research limitations:

Due to the limited research community in Tehran, it is suggested that future researchers conduct this research in a wider environment. It is also suggested to pay special attention to the possibility of suffering from psychological disorders in the post-corona era, and develop treatment plans to increase psychological adaptation. It should be considered with the focus on improving mental health.

Conflict of interest:

In this study, no conflict of interest was mentioned among the researchers.

Application of research:

The findings of this research can be useful for students and psychologists who are involved with patients with anxiety disorders.

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