Research Paper
The Efficacy of Cognitive-Behavioral Therapy on Coping Strategies and Anxiety Sensitivity of Patients With COVID-19 Obsession

Farzin Bagheri Sheykhangafshe[1*] , Ali Fathi-Ashtiani[2] , Vahid Savabi Niri[3] , Samaneh Otadi[4] , Hamed Rezaei Golezani[5]

1. Department of Psychology, Faculty of Humanities, Tarbiat Modares University, Tehran, Iran.
2. Behavioral Sciences Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran.
3. Department of Clinical Psychology, Faculty of Humanities, Ardabil Branch, Islamic Azad University, Ardabil, Iran.
4. Department of Clinical Psychology, Faculty of Humanities, Islamshahr Branch, Islamic Azad University, Tehran, Iran.
5. Department of Experimental Psychology, Faculty of Humanities, Urmia Branch, Islamic Azad University, Urmia, Iran.

ABSTRACT

Background: One of the factors affecting people's mental health is having repeated and confused thoughts about COVID-19. In this regard, the present study was conducted to investigate the effectiveness of cognitive-behavioral therapy on coping strategies and anxiety sensitivity of patients with COVID-19 obsession.

Methods: The present research method was quasi-experimental and pre-test-post-test design with a control group. The statistical population of the study included patients with COVID-19 obsession in 2021. The study sample includes 30 patients with COVID-19 obsession who were selected using the convenience sampling method and were randomly divided into two experimental groups (n=15) and control groups (n=15). The collection tool included a questionnaire on COVID-19 obsession, coping strategies, and anxiety sensitivity. The experimental group received ten 90-minute sessions of cognitive-behavioral therapy, but the control group received no intervention. Finally, the obtained data were analyzed by multivariate covariance analysis in SPSS software, version 24 (P<0.05).

Results: The results showed that cognitive-behavioral therapy significantly increased the problem-oriented coping strategy and decreased the emotion-oriented coping strategy, avoidance coping strategy, and anxiety sensitivity (physical, cognitive and social) in patients with COVID-19 obsession (P<0.01).

Conclusion: The obtained findings indicated that cognitive-behavioral therapy can significantly improve the patients with COVID-19 obsession. Considering the long-term consequences of COVID-19, psychology and counseling centers should take measures to identify and treat vulnerable groups.

Keywords: Cognitive-behavioral therapy, Coping strategies, Anxiety sensitivity, COVID-19 obsession

* **Corresponding Author:**
Farzin Bagheri Sheykhangafshe
Address: *Department of Psychology, Faculty of Humanities, Tarbiat Modares University, Tehran, Iran.*
Phone: *+98 (911) 4969488*
E-mail: *farzinbagheri@modares.ac.ir*

1. Introduction

More than two years after the coronavirus in 2019, many people are affected by the long-term psychological consequences of the COVID-19 pandemic [1]. According to the studies, one of the factors that can affect people's mental health is having repetitive and chaotic thoughts about COVID-19 [2]. After hearing various news about the number of infected, deaths, and common symptoms of COVID-19, it was not far from the expectation that obsessive thoughts about COVID-19 would form among people [3, 4]. Patients with intellectual and scientific obsessions have various symptoms, including contamination or cleaning, hoarding or accumulation, checking, symmetry, and obsessive rituals [5]. During the outbreak of COVID-19, many people became sensitive to their physical symptoms; they tried to get more information about the new symptoms of COVID-19, the mutations it has found, and the number of infected people [6]. The findings of Abba-Aji et al. [7] indicated a prevalence of 60.3% of obsessive-Compulsive Disorder (OCD) during the outbreak of COVID-19. Also, many people suffer from high anxiety and stress due to obsessive thoughts and behavior. The results of the study by Loosen et al. [8] also showed that people who sought a lot of information about the symptoms, signs, and number of COVID-19 sufferers had high depression and anxiety, which led to an increase in their fear of coronavirus.

One of the crucial variables that can help people's mental health during the COVID-19 pandemic is stress coping strategies [9]. Coping styles mean the cognitive and behavioral efforts of a person to interpret and correct a stressful situation and lead to the reduction of suffering and stress caused by those special conditions. These coping styles are divided into three general categories, problem-oriented, emotion-oriented, and avoidance. The problem-oriented interactional style describes the methods based on which a person examines the actions to be taken to reduce or eliminate a stressful factor [10]. The emotion-oriented coping style includes methods based on which a person focuses on himself and focuses all his efforts on reducing his unpleasant feelings, which includes most emotional reactions [11]. Avoidant coping style requires activities and cognitive changes that aim to avoid the stressful situation and may appear in the form of turning to a new activity and getting involved with it or turning to society and other people [12]. During the COVID-19 epidemic, due to the unknown nature of the disease and the high anxiety of people, coping styles are considered very effective [13, 14]. In a research, Rosa-

Alcázar et al. [15] examined coping strategies in patients with OCD during the outbreak of COVID-19. The obtained results showed that compared to healthy people, obsessive-compulsive patients use ineffective coping strategies that increase anxiety and stress in them. In review research, Bhattacharjee et al. [16] examined the role of coping strategies in increasing the mental health of people during the COVID-19 pandemic. According to the surveys, 72% of the people had low mental health. On the other hand, using problem-oriented coping strategies in stressful situations increased the quality of life and mental health of people.

Due to the unknown nature of COVID-19, many people in the world experienced high anxiety sensitivity for a long time. Anxiety sensitivity is defined as the fear of anxiety and feelings related to anxiety and is considered a prominent factor in anxiety disorders [17, 18]. People with anxiety sensitivity have an incorrect and distorted interpretation of their physical feelings and are worried about the consequences, which in turn increases their fear and anxiety [19]. During the COVID-19 epidemic, news and false information about the disease were spread among the people, the number of infected and dead was very high, and the observance of health and quarantine points caused anxiety sensitivity and obsessive thoughts in many people around the world [20, 21]. In a study, Warren et al. [22] investigated the relationship between anxiety sensitivity, mental health, and fear of COVID-19. The obtained results showed that people with high anxiety sensitivity suffered from significant anxiety and fear of COVID-19. Also, anxiety sensitivity decreased mental health, which resulted in various psychological disorders, such as depression, stress, and obsession. In another study, Beitzell et al. [23] investigated anxiety sensitivity and COVID-19 obsession. The findings showed that patients who had high levels of anxiety sensitivity had more fear and obsession with COVID-19, which reduced their mental health and sleep quality.

Along with the drug treatments that exist for practical OCD, psychological approaches that are very practical and without side effects are used. The cognitive-behavioral approach is one of the most experimental approaches to explain OCD. It believes that most of the symptoms of OCD are caused by dysfunctional beliefs that lead to a vicious cycle of stress, discomfort, anxiety, and repetitive actions [24]. Cognitive approaches believe that a person's beliefs cause the aggravation of the disease, the person's helplessness, and the conflict between the mind and behavior [25]. During the COVID-19 pandemic, studies showed that people who underwent online and face-to-face cognitive-behavioral therapy

42

Bagheri Sheykhangafshe F, et al. Coping Strategies and Anxiety Sensitivity of Patients With COVID-19 Obsession. JRH. 2022; 13(1):41-50

had fewer obsessive thoughts and behaviors over time [26, 27]. Considering that OCD has many cognitive and mental dimensions that can disrupt the patient's life, 1st of all, the patient's emotions and cognition should be improved by using cognitive therapies. Considering the increasing prevalence of OCD of COVID-19 at the community level and the importance of examining patients from psychosocial aspects, cognitive-behavioral therapy can be further investigated [24].

Since observing personal hygiene and maintaining social distancing is one of the critical ways to prevent the further spread of COVID-19, the risk of developing dementia during the COVID-19 pandemic is considered very likely. The fears and stress caused by COVID-19 have caused problems for people who have the necessary background to suffer from obsession. To the extent that this cleaning is carried out extremely and disrupts their normal life. Considering the importance of this issue, the present study was conducted to investigate the effectiveness of cognitive-behavioral therapy on coping strategies and anxiety sensitivity of patients with CO-VID-19 obsession.

2. Methods

The current research method was quasi-experimental and Pre-test-Post-test design with a control group. The statistical population of the present study was people with OCD referring to psychological and counseling centers and clinics in Tehran Province, Iran in 2021. After the implementation of the COVID-19 obsession questionnaire, the patients who obtained high scores on the COVID-19 obsession questionnaire were selected as the final sample of the study. Among these people, 30 patients were selected and randomly divided into two experimental groups (n=15) and a control group (n=15) [28]. The inclusion criteria included access to the Internet, no serious illness, no use of psychiatric drugs, and personal satisfaction. Also, the exclusion criteria included failure to answer the questions, worsening the intensity of obsession, and absence of more than 2 sessions in therapy sessions. To comply with the ethical points of the research, 1st, the consent of the patients and clinic officials was obtained. Also, the patients were allowed to withdraw from the study at any time. For confidentiality, the people were assured that the information obtained from the research will be analyzed as a group and that their individual information will remain completely confidential. At the end of sampling, more complete oral explanations about the topic, method, and objectives of the research were given to the patients.

Research tools

COVID-19 Obsession Scale: the COVID-19 obsession questionnaire is a 4-item single-factor scale designed to measure disturbing thoughts about COVID-19 [3]. Participants are asked to rate the extent to which they have experienced each condition in the past two weeks using a Likert scale ranging from not at all (score 0) to very much (score 4). The minimum possible score will be 0 and the maximum will be 16. A total score of 7 and above indicates obsessive thinking about COVID-19. According to the conducted investigations, the COVID-19 obsession scale has acceptable and favorable fit indices (CFI=0.99, RMSEA=0.06) and concurrent reliability (0.45 to 0.83). Also, the reliability of this scale was obtained using the internal consistency method of 0.85 [3]. In Iran, Bagheri Sheykhangafshe et al. [29] reported the content validity index and the content validity ratio of the questionnaire as 0.88 and 0.91, respectively, which show the optimal content validity of the questionnaire for COVID-19 obsession. Also, Cronbach's alpha coefficient of this questionnaire was obtained as 0.82. In the present study, Cronbach's alpha coefficient of this questionnaire was 0.86.

Stress Coping Styles Scale: Endler and Parker [11] developed this questionnaire to evaluate the types of coping styles of people in stressful situations in three coping styles, problem-oriented, emotion-oriented, and designed avoidance. This test consists of 48 questions, each 16 questions are related to one of the coping dimensions, which are scored on a Likert scale of 1 to 5 degrees. The validity of this test has been obtained by calculating Cronbach's alpha coefficient in the study of Endler and Parker [11] for three styles in the range of 0.82 to 0.92. The reliability coefficient of the scale by Endler and Parker [11] for problem-oriented, emotion-oriented, and avoidance coping styles was 0.92, 0.82, and 0.85, respectively, for the sample of boys. For girls, 0.90, 0.85, and 0.82 were obtained. In Iran, several studies investigated the reliability of the mentioned scale, which shows the high validity of this test [30]. In the present study, Cronbach's alpha coefficient was obtained for problem-oriented, emotion-oriented, and avoidance coping styles, respectively, 0.82, 0.89, and 0.84.

Anxiety Sensitivity Index-3: Anxiety sensitivity index-three measures the level of worry about different symptoms of anxiety [19]. This index is derived from the edited anxiety sensitivity index, which consists of 18 items. The anxiety sensitivity index evaluates the three levels of physical (6 items), cognitive (6 items), and social (6 items) related to anxiety, and the response and scoring of

Bagheri Sheykhangafshe F, et al. Coping Strategies and Anxiety Sensitivity of Patients With COVID-19 Obsession. JRH. 2022; 13(1):41-50

43

the anxiety sensitivity index is a five-point Likert scale from zero (a little) agree) to 4 (completely agree) and the total score is between 0 and 72. Anxiety sensitivity index from internal consistency (between 0.76 and 0.86 for physical concerns, between 0.79 and 0.91 for cognitive concerns, and between 0.73 and 0.86 for social concerns), has good convergent and divergent validity [19]. In Iran, Cronbach's alpha coefficient of the whole index was reported as 0.83 [31]. In the present study, Cronbach's alpha coefficient of physical, cognitive, and social subscales was reported as 0.89, 0.84, and 0.80 respectively.

Intervention program

Cognitive-Behavioral Therapy Sessions for Obsessive-Compulsive Disorder (OCD): This intervention method is based on large-scale intervention programs to reduce psychological problems and interventions to reduce compulsive thought and behavioral symptoms presented to patients with OCD [32]. Before the implementation of the treatment, 1st, the questionnaires were administered to the patients as a self-report (pre-test), then the members of the experimental group in the psychology and counseling clinic received cognitive-behavioral therapy as a group by an expert and trained psychologist during 10 sessions of 90 minutes (2 months, one session per week). But the control group did not receive treatment in this study. Finally, after the end of the treatment ses-

sions, a post-test was taken from both experimental and control groups. Table 1 presents a brief description of cognitive-behavioral therapy intervention. Compared to the control group, the experimental group received 10 90-minute sessions of cognitive-behavioral therapy intervention (Table 1).

Statistical analyses

The obtained data were analyzed by multivariate covariance analysis (MANCOVA) in SPSS software, version 24.

3. Results

The average age of the participants in the experimental group and the control group was 35.74 and 36.42 years. A total of 41% of the patients had a government job and 59% were self-employed; 78% of people were married and 22% were single. In terms of education level, 18% had a diploma, 53% had a diploma, and 29% had a university education. Also, the average income level of people was nearly four million tomans. Table 2 presents the mean and standard deviation of Pre-test-Post-test scores of coping strategies and anxiety sensitivity in patients with COVID-19 obsession in the experimental and control groups. Also in this table, the results of the Shapiro-Wilk test (S-W) are reported to check the normality of the distribution of variables in the two groups. Accord-

Table 1. The content of cognitive-behavioral therapy sessions for patients with obsessive-compulsive disorder (OCD) [32]

Session	
1	General familiarity with the symptoms of OCD. Getting to know the goals of cognitive-behavioral therapy. List disturbing images and thoughts of ordinary people. Relaxation exercise
2	Drawing a cognitive model of obsession. Normalization of obsessive thoughts. Drawing a cognitive triangle. List the types of cognitive errors. Filling in the daily thought registration form. Explaining the importance of thoughts and mixing thoughts and conducting behavioral experiments
3	Using the cognitive techniques of Socratic questioning and reviewing the sheet of 5 columns of thoughts. Filling out the 7-column sheet of thoughts. List the pros and cons of intrusive thoughts. Conducting a behavioral test for the importance of thoughts
4	Checking the daily thoughts registration form. A behavioral test for thought neutralization. Using probability calculation technique and Socratic questioning to believe overestimation of risk. Design of behavioral experiments for belief and reassurance.
5	Socratic questioning and implementation of pie chart technique and double standard technique for extreme responsibility belief. Defining perfectionism and using Socratic questioning and the downward arrow technique in this context. Formulation of behavioral experiments for the importance of thoughts.
6-9	Teaching and implementing the technique of confronting and preventing the response and practicing it in the presence of the therapist and at home. Revising the list of the daily thought's registration forms. Design of behavioral experiments for the importance of thoughts.
10	Discussion and summary of cognitive and behavioral techniques. Review the daily thought log. A review of the cognitive model of obsession. Re-explaining the importance of behavioral exercises. Discussing the symptoms of relapse. Teaching problem-solving steps.

OCD: Obsessive-compulsive disorder

JRH

44

Bagheri Sheykhangafshe F, et al. Coping Strategies and Anxiety Sensitivity of Patients With COVID-19 Obsession. JRH. 2022; 13(1):41-50

Journal of Research & Health

Table 2. Descriptive indices of study's variables in control and experimental groups

Variables		Groups	Mean±SD	S-W	P
Problem-oriented	Pre-test	Experimental	38.67±1.25	0.107	0.067
		Control	38.53±2.66	0.096	0.066
	Post-test	Experimental	43.26±2.17	0.137	0.058
		Control	38.41±2.07	0.091	0.161
Emotion-oriented	Pre-test	Experimental	56.07±3.78	0.066	0.056
		Control	56.27±2.50	0.091	0.072
	Post-test	Experimental	51.02±3.49	0.095	0.074
		Control	56.34±2.91	0.091	0.097
Avoidance-oriented	Pre-test	Experimental	59.26±3.64	0.052	0.097
		Control	59.13±3.84	0.095	0.073
	Post-test	Experimental	53.14±2.17	0.090	0.171
		Control	59.41±3.22	0.095	0.071
Physical	Pre-test	Experimental	19.26±3.63	0.097	0.059
		Control	19.41±2.85	0.094	0.078
	Post-test	Experimental	16.02±1.97	0.124	0.088
		Control	19.13±3.09	0.095	0.073
Cognitive	Pre-test	Experimental	8.61±3.15	0.089	0.055
		Control	18.73±2.81	0.152	0.063
	Post-test	Experimental	14.46±3.17	0.096	0.057
		Control	18.47±2.98	0.103	0.067
Social	Pre-test	Experimental	17.06±2.83	0.109	0.058
		Control	17.21±3.12	0.085	0.052
	Post-test	Experimental	14.62±2.27	0.075	0.059
		Control	16.93±3.43	0.175	0.086

S-W: Shapiro-Wilk test.

URH

ing to this table, Shapiro-Wilk statistics is not significant for all variables. Therefore, it can be concluded that the distribution of variables is normal (Table 2).

Multivariate covariance analysis was used to evaluate the efficacy of cognitive-behavioral therapy on coping strategies and anxiety sensitivity of patients with COVID-19 obsession. The results of the Levin test to examine the homogeneity of variance of dependent variables in groups showed that the variance of coping strategies (F=4.03, P=0.054), and anxi-ety sensitivity (F=1.05, P=0.317) was equal in the groups. The results of the box test to evaluate the equality of the co-variance matrix of dependent variables between the experi-mental and control groups also showed that the covariance matrix of the dependent variables is equal (Box M=35.74, F=1.30, P=0.160). The significance of the box test is greater than 0.05, therefore this assumption is valid. Also, the results of Bartlett's chi-square test to examine the sphericity or sig-nificance of the relationship between coping strategies and anxiety sensitivity showed that the relationship between them

Bagheri Sheykhangafshe F, et al. Coping Strategies and Anxiety Sensitivity of Patients With COVID-19 Obsession. JRH. 2022; 13(1):41-50

45

is significant (χ^2=59.28, df=20, P<0.01). Another crucial assumption of multivariate covariance analysis is the homogeneity of regression coefficients. It should be noted that the homogeneity test of regression coefficients was examined through the interaction of dependent variables and independent variables (intervention method) in the Pre-test and Post-test. The interaction of these Pre-tests and Post-tests with the independent variable was not significant and indicated the homogeneity of the regression slope; therefore, this assumption is also valid. Due to the establishment of multivariate covariance analysis, the use of this test will be allowed. Then, to find out the differences between the groups, a multivariate analysis of covariance was performed (Table 3).

According to Table 3, the results showed the effect of the independent variable on the dependent variables; In other words, experimental and control groups have a significant difference in at least one of the variables of coping strategies and anxiety sensitivity, which according to the calculated effect size, 73% of the total variance of experimental and control groups is due to the effect of the independent variable. Also, the statistical power of the test is equal to 1, which indicates the adequacy of the sample size. However, to determine in which areas the difference is significant, a univariate analysis of the covariance test was used in the MANCOVA, Table 4 presents its results.

According to Table 4, F-statistic is significant for problem-oriented (24.35), emotion-oriented (19.57), avoidance-oriented (36.25), physical (21.72), cognitive (30.61), and social (16.53) at the level of 0.001. These findings show a significant difference between the groups in these variables. Also, according to the calculated effect size, 52% problem-oriented, 47% emotion-oriented, 62% avoidance-oriented, 49% physical, 58% cognitive, and 43% social were independent of the effect of the variable; As a result, it can be stated that cognitive behavioral therapy significantly increases problem-oriented, and decrease emotion-oriented, avoidance-oriented, anxiety sensitivity (physical, cognitive, and social) in patients with COVID-19 obsession.

4. Discussion

The present study was conducted to investigate the effectiveness of cognitive-behavioral therapy on coping strategies and anxiety sensitivity of patients with COVID-19 obsession. The obtained results showed that cognitive-behavioral therapy significantly increases the problem-oriented coping strategy and decreases the emotion-oriented and avoidance coping strategies in patients with COVID-19 obsession. The obtained results are by the research of Rosa-Alcázar et al. [15] and Bhattacharjee et al. [16].

Table 3. The results of multivariate analysis of covariance on mean post-test scores

Test	Value	F	df	Error df	P	Effect Value
Pillai's Trace	0.730	7.673	6	17	0.001	0.73
Wilks Lambda	0.270	7.673	6	17	0.001	0.73
Hotelling Trace	2.708	7.673	6	17	0.001	0.73
Roy's Largest Root	2.708	7.673	6	17	0.001	0.73

JRH

Table 4. Results of univariate analysis of covariance on the mean of post-test scores of dependent variables in two experimental and control groups

Variables	SS	SS Error	df	MS	MS Error	F	P	Effect Value
Problem-oriented	153.504	138.64	1	153.504	6.30	24.35	0.001	0.52
Emotion-oriented	184.209	207.01	1	184.209	9.41	19.57	0.001	0.47
Avoidance-oriented	281.153	170.61	1	281.153	7.75	36.25	0.001	0.62
Physical	67.169	68.03	1	67.169	3.09	21.72	0.001	0.49
Cognitive	110.632	79.52	1	110.632	3.61	30.61	0.001	0.58
Social	39.062	51.99	1	39.062	2.36	16.53	0.001	0.43

SS: Sum of squares; MS: Mean square.

JRH

In explaining these findings, it can be acknowledged that people who use problem-oriented coping strategies face their behavior and are trying to choose the best alternative. On the other hand, the use of emotion-oriented and avoidance coping strategies may help to improve the person's condition in the short term, but over time, it leads to the worsening of anxiety and obsession in the patient [15]. During the COVID-19 epidemic, people who go to read news related to COVID-19 patients and deaths become more sensitive to their symptoms and more obsessive acts are evident in their behavior [11]. In this context, Budimir et al. [13] investigated coping strategies to increase the mental health of people during the COVID-19 outbreak. The findings showed that the use of positive coping strategies increased the quality of life, psychological well-being, optimism, and life expectancy. On the other hand, the use of negative coping strategies led to obsessive thoughts, anxiety, depression, and insomnia. In another study, Fukase et al. [14] examined the relationship between coping strategies and depression and anxiety during the COVID-19 pandemic. The findings revealed that 18.35% of people had a high level of depression. Factors, such as loneliness, age, gender, economic status, and coping strategies had a significant relationship with the severity of depression.

On the other hand, the findings revealed that cognitive-behavioral therapy significantly reduces anxiety sensitivity (physical, cognitive, and social) in patients suffering from COVID-19 obsession. These findings are consistent with the research of Warren et al. [22] and Beitzell et al. [23]. Anxiety sensitivity includes the belief that the symptoms of anxiety or arousal can have adverse social and personal consequences for the individual. It is one of the vital factors that are related to anxiety disorders and can play a role in using ineffective coping styles, such as escape and avoidance behaviors [18]. Although anxiety sensitivity has been proven to be a trait-based risk factor for psychological disorders, research evidence shows that this element is flexible, and cognitive behavioral therapy can reduce it [20].

Anxiety sensitivity is the tendency to respond out of fear to the anxiety that a person feels, and in a sense, it means believing that the experience of anxiety in itself is dangerous and harmful [17]. Regarding the relationship between anxiety sensitivity and COVID-19 obsession, it can be said that anxiety sensitivity causes a person to consider his anxiety symptoms as harmful and have disastrous consequences [23]. As a result of this type of interpretation, disaster prediction causes disaster anxiety and increases the intensity of the person's obsessive symptoms [20]. Until today, much research

evidence has shown that anxiety sensitivity is considered a powerful factor in increasing obsessive-compulsive symptoms. Considering that during the outbreak of COVID-19, a significant number of people are experiencing different levels of obsession in response to social media news, anxiety sensitivity is another issue that should be considered in the COVID-19 response. In this regard, McKay et al. [20] investigated the relationship between anxiety sensitivity and anxiety of COVID-19 in research. The obtained results showed that people with high anxiety sensitivity suffer from many psychological problems that cause fear, obsession, and anxiety about COVID-19 in them. In another study, Manning et al. [21] investigated the perceived sensitivity, anxiety sensitivity, and performance of people during the outbreak of COVID-19. The obtained findings had a significant relationship between anxiety sensitivity and the decrease in people's performance during the outbreak of COVID-19. Also, the perceived sensitivity increased anxiety and fear around COVID-19, leading to decreased people's mental health.

In the cognitive-behavioral model, people identify thoughts causing negative symptoms, especially thoughts related to anxiety, by recognizing the cognitive pattern. Also, by increasing awareness and information about the disease and also common problems, such as frequent checking of physical signs, and avoidance behaviors that continue mental preoccupation, they become familiar with the correct techniques to deal with mental pressure, and as a result, this process reduces anxiety sensitivity in people [26]. Learning strategies and treatment techniques in patients causes them to generalize the strategies they have learned to their other symptoms. In addition, the therapist's support also strengthens the perceived self-efficacy in these people, and this makes them adhere to the use of treatment methods [24]. The emotional expression of feelings is an effective factor for coping with stress and causes emotional discharge; however, this method may be used incorrectly in some people who are highly sensitive to anxiety. People with anxiety sensitivity, by expressing negative emotions too much, tire the people around them and lose their social support. In addition, it has been determined that some people with high anxiety sensitivity try to hide their negative thoughts and feelings, and restraining emotions increases negative feelings and thoughts in these people, which in turn increases the vicious cycle of rumination. And as a result, it becomes anxiety. As a result, cognitive behavioral therapy can play an effective role in reducing anxiety sensitivity by providing homework and helping to release emotions [25, 26].

Bagheri Sheykhangafshe F, et al. Coping Strategies and Anxiety Sensitivity of Patients With COVID-19 Obsession. JRH. 2022; 13(1):41-50

47

The study had some limitations, such as the statistical population of the research, the lack of random selection of the participants, and the impossibility of controlling the social, educational, and economic status of the research participants, which may have a role in the generalizability of the results. Therefore, it is suggested to take measures to control these components in future research. The impossibility of long-term follow-up of the impact of the program using the follow-up test and the lack of separate treatment for the control group were also other limitations. Based on this, it is suggested to pay attention to this issue in future studies so that it is possible to examine the long-term effect of cognitive-behavioral therapy. Also, due to the overlapping of obsession and anxiety about COVID-19, future studies should be conducted to compare the effectiveness of psychological interventions for patients with high levels of obsession and anxiety about COVID-19, so that the effectiveness of these interventions can be reported correctly.

5. Conclusion

The results of the present study showed that cognitive-behavioral therapy in patients with COVID-19 obsessions significantly increases problem-oriented coping strategies and decreases emotion-oriented coping strategies, avoidant coping strategies, and anxiety sensitivity (physical, cognitive, and social). Because obsessive-compulsive patients were cognitively affected by the COVID-19 pandemic, by participating in cognitive-behavioral therapy sessions and correcting their thoughts about COVID-19, they can control their emotions and thoughts over time. Since it is not possible to envisage a specific date for the end of the outbreak of COVID-19, it is necessary to take preventive and auxiliary measures to reduce the psychological dimensions of the COVID-19 pandemic.

Ethical Considerations

Compliance with ethical guidelines

The study was approved by the Ethics Committee of Baqiyatallah University of Medical Sciences (Code: IR.BMSU.REC.1399.139).

Funding

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

Authors' contributions

Conceptualization of the project, review, and editing: Farzin Bagheri Sheykhangafshe, and Ali Fathi-Ashtiani;

Methodology: Vahid Savabi Niri, and Samaneh Otadi; Writing the original draft: Farzin Bagheri Sheykhangafshe, and Hamed Rezaei Golezani.

Conflict of interest

The authors declared no conflict of interest.

References

[1] Arora T, Grey I, Östlundh L, Lam KB, Omar OM, Arnone D. The prevalence of psychological consequences of covid-19: A systematic review and meta-analysis of observational studies. Journal of Health Psychology. 2022; 27(4):805-24. [DOI:10.1177/1359105320966639] [PMID]

[2] Chakraborty A, Karmakar S. Impact of covid-19 on obsessive-compulsive disorder (OCD). Iranian Journal of Psychiatry. 2020; 15(3):256. [DOI:10.18502/ijps.v15i3.3820] [PMID] [PMCID]

[3] Choi E, Lee J, Lee SA. Validation of the Korean version of the obsession with covid-19 scale and the coronavirus anxiety scale. Death Studies. 2022; 46(3):608-14. [DOI:10.1080/07481187.2020.1833383] [PMID]

[4] Bagheri Sheykhangafshe F, Hajialiani V, Hasani J. The role of resilience and emotion regulation in psychological distress of hospital staff during the covid-19 pandemic: A systematic review study. Journal of Research and Health. 2021; 11(6):365-74. [DOI:10.32598/JRH.11.6.1922.1]

[5] Van Ameringen M, Patterson B, Turna J, Lethbridge G, Bergmann CG, Lamberti N, et al. Obsessive-compulsive disorder during the covid-19 pandemic. Journal of Psychiatric Research. 2022; 149:114. [DOI:10.1016/j.jpsychires.2022.02.001] [PMID] [PMCID]

[6] Mrklas K, Shalaby R, Hrabok M, Gusnowski A, Vuong W, Surood S, et al. Prevalence of perceived stress, anxiety, depression, and obsessive-compulsive symptoms in health care workers and other workers in Alberta during the covid-19 pandemic: Cross-sectional survey. JMIR Mental Health. 2020; 7(9):e22408. [DOI:10.2196/22408] [PMID] [PMCID]

[7] Abba-Aji A, Li D, Hrabok M, Shalaby R, Gusnowski A, Vuong W, et al. Covid-19 pandemic and mental health: Prevalence and correlates of new-onset obsessive-compulsive symptoms in a Canadian province. International Journal of Environmental Research and Public Health. 2020; 17(19):6986. [DOI:10.3390/ijerph17196986] [PMID] [PMCID]

[8] Loosen AM, Skvortsova V, Hauser TU. Obsessive-compulsive symptoms and information seeking during the covid-19 pandemic. Translational Psychiatry. 2021; 11(1):1-10. [DOI:10.1038/s41398-021-01410-x] [PMID] [PMCID]

[9] Rosa-Alcázar Á, Parada-Navas JL, García-Hernández MD, Martínez-Murillo S, Olivares-Olivares PJ, Rosa-Alcázar AI. Coping strategies, anxiety and depression in OCD and schizophrenia: Changes during covid-19. Brain Sciences. 2021; 11(7):926. [DOI:10.3390/brainsci11070926] [PMID] [PMCID]

48

Bagheri Sheykhangafshe F, et al. Coping Strategies and Anxiety Sensitivity of Patients With COVID-19 Obsession. JRH. 2022; 13(1):41-50.

[10] Patias ND, Von Hohendorff J, Cozzer AJ, Flores PA, Scorsolini-Comin F. Mental health and coping strategies in undergraduate students during covid-19 pandemic. Trends in Psychology. 2021; 29(3):414-33. [DOI:10.1007/s43076-021-00069-z]

[11] Endler NS, Parker JD. Multidimensional assessment of coping: A critical evaluation. Journal of Personality and Social Psychology. 1990; 58(5):844-54. [DOI:10.1037/0022-3514.58.5.844] [PMID]

[12] Umucu E, Lee B. Examining the impact of covid-19 on stress and coping strategies in individuals with disabilities and chronic conditions. Rehabilitation Psychology. 2020; 65(3):193. [DOI:10.1037/rep0000328] [PMID]

[13] Budimir S, Probst T, Pieh C. Coping strategies and mental health during covid-19 lockdown. Journal of Mental Health. 2021; 30(2):156-63. [DOI:10.1080/09638237.2021.1875412] [PMID]

[14] Fukase Y, Ichikura K, Murase H, Tagaya H. Depression, risk factors, and coping strategies in the context of social dislocations resulting from the second wave of covid-19 in Japan. BMC Psychiatry. 2021; 21(1):1-9. [DOI:10.1186/s12888-021-03047-y] [PMID] [PMCID]

[15] Rosa-Alcázar Á, García-Hernández MD, Parada-Navas JL, Olivares-Olivares PJ, Martínez-Murillo S, Rosa-Alcázar AI. Coping strategies in obsessive-compulsive patients during covid-19 lockdown. International Journal of Clinical and Health Psychology. 2021; 21(2):100223. [DOI:10.1016/j.ijchp.2021.100223] [PMID] [PMCID]

[16] Bhattacharjee B, Acharya T. The covid-19 pandemic and its effect on mental health in USA-a review with some coping strategies. Psychiatric Quarterly. 2020; 91(4):1135-45. [DOI:10.1007/s11126-020-09836-0] [PMID] [PMCID]

[17] Rogers AH, Bogiaizian D, Salazar PL, Solari A, Garey L, Fogle BM, et al. Covid-19 and anxiety sensitivity across two studies in Argentina: Associations with covid-19 worry, symptom severity, anxiety, and functional impairment. Cognitive Therapy and Research. 2021; 45(4):697-707. [DOI:10.1007/s10608-020-10194-1] [PMID] [PMCID]

[18] Avidor S, Abu Hamam A, Lahav Y. The toll of feeling older: Subjective age moderates the associations between anxiety sensitivity and symptoms of anxiety and depression during the covid-19 epidemic. The Journals of Gerontology: Series B. 2022; 77(4):e5-10. [DOI:10.1093/geronb/gbab082] [PMID] [PMCID]

[19] Taylor S, Zvolensky MJ, Cox BJ, Deacon B, Heimberg RG, Ledley DR, et al. Robust dimensions of anxiety sensitivity: Development and initial validation of the anxiety sensitivity index-3. Psychological Assessment. 2007; 19(2):176. [DOI:10.1037/1040-3590.19.2.176] [PMID]

[20] McKay D, Yang H, Elhai J, Asmundson GJ. Anxiety regarding contracting COVID-19 related to interoceptive anxiety sensations: The moderating role of disgust propensity and sensitivity. Journal of Anxiety Disorders. 2020; 73:102233. [DOI:10.1016/j.janxdis.2020.102233] [PMID] [PMCID]

[21] Manning K, Eades ND, Kauffman BY, Long LJ, Richardson AL, Garey L, et al. Anxiety sensitivity moderates the impact of covid-19 perceived stress on anxiety and functional impairment. Cognitive Therapy and Research. 2021; 45(4):689-96. [DOI:10.1007/s10608-021-10207-7] [PMID] [PMCID]

[22] Warren AM, Zolfaghari K, Fresnedo M, Bennett M, Pogue J, Waddimba A, et al. Anxiety sensitivity, COVID-19 fear, and mental health: Results from a United States population sample. Cognitive Behaviour Therapy. 2021; 50(3):204-16. [DOI:10.1080/16506073.2021.1874505] [PMID]

[23] Beitzell E, Podduturi P, Hook M, Jones A, McKeen H, Liss M. Covid on the brain: Anxiety sensitivity and mindful awareness mediate the relationship between covid-19 obsession and anxiety. OBM Integrative and Complementary Medicine. 2021; 6(4):1-10. [DOI:10.21926/obm.icm.2104053]

[24] Pinciotti CM, Bulkes NZ, Horvath G, Riemann BC. Efficacy of intensive CBT telehealth for obsessive-compulsive disorder during the covid-19 pandemic. Journal of Obsessive-Compulsive and Related Disorders. 2022; 32:100705. [DOI:10.1016/j.jocrd.2021.100705] [PMID] [PMCID]

[25] Candelari AE, Wojcik KD, Wiese AD, Goodman WK, Storch EA. Expert opinion in obsessive-compulsive disorder: Treating patients with obsessive-compulsive disorder during the covid-19 pandemic. Personalized Medicine in Psychiatry. 2021; 27:100079. [DOI:10.1016/j.pmip.2021.100079] [PMCID]

[26] Zaccari V, Gragnani A, Pellegrini V, Caiazzo T, D'Arienzo MC, Magno A, et al. An observational study of OCD patients treated with cognitive behavioral therapy during the covid-19 pandemic. Frontiers in Psychiatry. 2021; 12:755744. [DOI:10.3389/fpsyt.2021.755744] [PMID] [PMCID

[27] Li I, Millard M, Haskelberg H, Hobbs M, Luu J, Mahoney A. Covid-19 related differences in the uptake and effects of internet-based cognitive behavioural therapy for symptoms of obsessive-compulsive disorder. Behavioural and Cognitive Psychotherapy. 2022; 50(2):219-36. [DOI:10.1017/S1352465821000448] [PMID]

[28] Smith PL, Little DR. Small is beautiful: In defense of the small-N design. Psychonomic Bulletin & Review. 2018; 25(6):2083-101. [DOI:10.3758/s13423-018-1451-8] [PMID] [PMCID]

[29] Bagheri Sheykhangafshe F, Farahani H, Fathi-Ashtiani A. [Psychometric properties of Persian version of covid-19 burnout and obsession scales in students during the coronavirus 2019 pandemic (Persian)]. Journal of Rafsanjan University of Medical Sciences. 2022; 21(4):413-32. [DOI:10.52547/jrums.21.4.413]

[30] Shokri O, Taghilou S, Geravand F, Paeizi M, Moulaei M, abd Elahpour M, Akbari H. [Factor structure and psychometric properties of the farsi version of the coping inventory for stressful situations (CISS) (Persian)]. Advances in Cognitive Sciences. 2009; 10 (3):22-33. [Link]

[31] Bagheri Sheykhangafshe F, Shabahang R, Tajbakhsh K, Hamideh Moghadam A, Sharifipour Choukami Z, Mousavi SM. [Role of health anxiety, anxiety sensitivity, and somatosensory amplification in predicting of students' covid-19 anxiety (Persian)]. Journal of Psychological Studies. 2021; 16(4):77-91. [DOI: 10.22051/PSY.2021.31286.2225]

[32] Wilhelm S, Steketee GS. Cognitive therapy for obsessive compulsive disorder: A guide for professionals. Oakland: New Harbinger Publications; 2006. [Link]

Bagheri Sheykhangafshe F, et al. Coping Strategies and Anxiety Sensitivity of Patients With COVID-19 Obsession. JRH. 2022; 13(1):41-50

49

This Page Intentionally Left Blank