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The effectiveness of Compassion-Focused Group therapy on Perceived Stress in the Covid-19 Epidemic among the Academic women

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Abstract

Background and objective: The Covid-19 virus epidemic, as a human catastrophe in the world, has endangered the bodies and souls of millions of people and has created high psychological stress among individuals that requires psychological intervention. The present study aimed to investigate the effectiveness of compassion-focused group therapy on perceived stress caused by Covid-19 virus epidemic among academic women.

Method: The method of this quasi-experimental study was a pretest-posttest design with a control group and its statistical population consists of academic women, in the summer of 2021. Of these, 30 people were considered based on a statistical sample of the research design. They were replaced in experimental and control groups (15 people in each group). The data were collected online through Cohen et al.'s Perceived Stress Questionnaire. Compassion-focused therapy intervention sessions were conducted online based on Gilbert's (2009) 8-session protocol of Compassionate Mind Training (CMT).

Results: The results of ANCOVA analysis indicated that compassion-focused group therapy was effective in reducing the perceived stress in the Covid-19 epidemic by 53% ($p<0.05$).

Conclusion: The results of this study can be used to reduce stress in the Covid-19 epidemic through compassion-based group therapy.

Keywords: Perceived stress, Covid-19, compassion therapy, Covid-19 epidemic

Introduction

December 2019 coincided with the onset of the outbreak of coronavirus, which originated in China and the city of Wuhan in central Hubei, and spread rapidly, affecting individuals and health organizations. The disease, abbreviated COVID-19, then spread around the world (1). New virus coronavirus-2019 (Virus Corona Disease) or Covid-19 (COVID-19) is an acute respiratory disease (Syndrome Respiratory Acute Severe) that is closely related to SARS coronavirus (2). Early symptoms of Covid-19 include pneumonia, fever, muscle aches, and fatigue (3). According to the World Health Organization, approximately 32101060 cases of this disease, about 982020 deaths and 436319 cases of this disease in Iran and about 25015 deaths have so far been reported until September 6, 2020 (4). Coronavirus disease has now reached pandemic status, while this pandemic is spreading rapidly around the world and has caused fear and anxiety in the general public (5). Fear of illness, fear of death, spreading false news and rumors, interfering with daily activities, travel bans or restrictions, reduced social relationships (co-workers, friends, and family), job and property problems, and dozens of other consequences are the conditions which threaten the mental health of people in the community. Undoubtedly, one of the most important of such factors is perceived stress related to Covid-19 disease (6, 7). According to the theory of stress, cognitive, behavioral and supportive resources available to individuals play a key role in how they adapt, which affects emotional reactions such as fear, anxiety and panic in affected individuals (8). In the model of stress caused by illness, two categories of individual and social resources are considered as important elements that can bring positive or negative therapeutic results for the individual (9). Cognitively, not only the stressors that a person

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suffers (10) but also how a person perceives stress that affects his health are important (11). This perception can be in two positive (the person is confident in their ability to deal effectively with stress factors) and negative ways (one feels unable to cope with existing problems and challenges) (12). One of the most important personal resources affecting stress is coping strategies (13). Those who use positive coping strategies (such as problem-based coping and positive evaluation) reduce negative outcomes and increase positive ones; while using negative coping strategies (such as emotion-focused coping and avoidant coping) is associated with an increase in negative consequences (14). Among such strategies, compassion-focused therapy has a positive relationship with reducing stress levels (15, 16) and is a new structure proposed by Nef (17, 18). This treatment focuses on relating to one's suffering rather than avoiding or disconnecting with it, creating a desire to alleviate that suffering and being kind to oneself (19). In addition, among therapeutic interventions, treatment focuses on multifaceted compassion therapy based on important and significant advances in acceptance and commitment therapy, cognitive-behavioral therapy, dialectical behavior therapy, emotion-oriented therapy, and emotional rational behavior therapy and many other approaches which has expanded with the aim of reducing components such as shame, self-criticism, and compassion (20).

Compassion therapy exercises emphasize relaxation, relaxation of mind, self-compassion and mindfulness, which play an important role in calming the mind, reducing stress and negative spontaneous thoughts (21). Among the techniques mentioned above, Compassionate Mind Training teaches psychotherapists how to effectively manage each system and respond to appropriate situations. Furthermore, compassion-focused therapy builds a positive therapeutic relationship in individuals that facilitates the process of engaging with the challenges posed by the Covid-19 epidemic and the development of coping skills; (22). Due to the emergence of coronavirus, little research and psychological interventions have been conducted to reduce the psychological pressure of Covid-19. The study conducted by Alizadeh and Saffarinia is considered as one of research which predicted mental health based on anxiety and social solidarity caused by coronavirus disease (23). Moreover, Shabahang (2019) found that cognitive-behavioral intervention is effective in reducing depression and anxiety in coronavirus anxiety (24). Regarding compassion therapy, the study conducted by Baharvandi et al. is referred, which focused on the effectiveness of compassion-focused therapy on the ability to tolerate the ambiguity and anxiety of death (25). This study confirmed the effectiveness of compassion-focused therapy as one of the new therapies in the field of emotional disorders in the treatment of anxiety disorders. Accordingly, Zhang et al. found that the stress by Covid-19 affects the overall health, sleep quality and posttraumatic stress symptoms (26). Further, the study conducted by Rabiaah-Al indicated that perceived stress caused by emotional illness affects not only patients but also nurses and therapists (27). Additionally, Huang and Rong indicated that coping strategies with stress are crucial determinants of treatment among people with Covid-19 disease and nurses (28). Regarding research gap mentioned above, this study sought to answer the question of whether compassion-focused group therapy can be effective in reducing the stress of the Coronavirus epidemic.

Method

A) Research design

The research method was quasi-experimental with pretest-posttest design with control group and its statistical population included academic women with associate education and age range of 20-45 years, in summer 2021, among which 30 people were considered in the statistical sample based on the research design who were randomly divided into two experimental (15 people) and control groups (15 people). The members of both groups answered the pretest online before the sessions began. The experimental group was exposed to the independent variable of compassion-focused therapy intervention sessions based on Gilbert’s 8-session Compassionate Mind Training (CMT) Protocol (2009) (29) and no intervention was performed on the control group. At the end, both groups answered the posttest after the end of the experimental period. The data were collected online through Cohen et al.'s Perceived Stress Questionnaire. Finally, the collected data were analyzed using test, ANCOVA and SPSS software version 26.

B) Instruments and materials

Perceived Stress Questionnaire

The Cohen et al. (Perceived Stress Questionnaire) (1983) has 14 items that measure a person's thoughts and feelings over the past month. (30) Each question is scored on a 4-point Likert scale. On this scale, the minimum and

maximum score of perceived stress is zero and 56, respectively. A higher score means more perceived stress. The validity of the structure and content was confirmed by the manufacturers and the reliability obtained by Cronbach's alpha method was equal to 0.86. Such a questionnaire was translated and standardized in Iran by Narimani and Abolghasemi (2006) and its reliability was evaluated as 0.84 (31). In the present study, the reliability of Cronbach's alpha method was 0.82.

C) Execution method

To conduct the present study, in line with ethical principles, participants were informed about the subject and method of conducting the research and then individuals were assured that their personal information would be protected and that their answers to questions would remain confidential. In addition, participation in the research will not entail any financial burden for them, finally, the results will be interpreted for them if they wish. It is worth noting that the present study did not contra dict the religious and cultural norms of the subjects and society. Accordingly, the examiner provided pre-test questionnaires to academic women, and after conducting the pretest, which was held online due to the high transmission of coronavirus, participants were randomly divided into experimental and control groups. In the experimental

group, intervention sessions were performed based on the compassion-focused group therapy intervention sessions and Gilbert's 8-session Compassionate Mind Training (CMT) Protocol, as shown in Table 1. In addition, the control group did not receive any intervention. Immediately after the final session, both groups responded to the posttest.

Table 1. **Gilbert's Compassionate Mind Training intervention protocol (2009)**

Session	Title	Descriptions	Homework
Session 1	Establishing a collaborative relationship	Having common interaction and activity, common ideals and goals, having our feelings, group dynamics	Rhythmic relaxation breathing practice
Session 2	Training empathy	Demonstrating a non-judgmental attitude, helping members, reacting to any rejection action helping each other	Answering the questions of how you are compassionate?
Session 3	What is self-compassion?	Forming and creating more diverse emotions Theories that explain the psychological pathology of disorders biologically and naturally	Identifying self-critical thoughts and behaviors
Session 4	Training forgiveness	Teach the concept of mindfulness, accepting mistakes and forgiving human commonalities	Practicing mindfulness in tracking thoughts and feelings
Session 5	Introducing mental imagery and its logic	Training imaging and its implementation in groups 1- Problem-oriented orientation, 2- Problem definition, 3- Producing solutions, 4- Evaluating solutions 5- Implementing the solution, 6- Teaching social skills and courage	Practicing mental imagery of the session with a compassionate person and considering its objective and partial features.
Session 6	Nurturing self-compassion	Training wisdom Ability Warmth and responsibility in creating compassion	Self-compassionate mental imagery
Session 7	Focusing on self - compassion and identifying its various dimensions	Practicing writing a compassionate letter to yourself Practicing self-compassion and procrastination Compassionate body scans in groups	Self-compasstion mental imagery
Session 8	Reminding compassion skills	Explaining the role of compassion in guiding the way of thinking and reactions of teaching compassionate thoughts and behavior towards the critic, Reviewing past sessions	Daily recording of the compassionate mind (self-critical thoughts / compassionate thoughts, compassionate behavior).

Findings

To evaluate the normality of the distribution of scores of control and experimental groups in the research variables, Shapiro-Wilk test was used. The result of this test was not significant (p <0.05); thus, the assumption of normal distribution of scores of experimental and control groups was established. Table 2 displays the statistics of the findings related to the perceived stress scores in the Covid-19 epidemic in the pretest and posttest of the control and experimental groups.

Table 2. **Descriptive results**

Descriptive Statistics			
Dependent Variable:Posttest			
Group	Mean	Std. Deviation	N
Experimental	33.60	8.025	15
Control	49.33	8.600	15
Total	41.47	11.437	30

As shown, compassion-focused group therapy reduced the mean score of perceived stress in the experimental group in the posttest compared to that of the pretest which was effective. In addition, due to the research method, which is a pretest-posttest with the control group, Levin test was used to investigate the assumption of similarity of research variables in the experimental and control groups, but the test result was not significant (Table 3). Additionally, as shown in Table 4, the results of regression slope homogeneity between pretest and posttest scores indicated that the value of Wilkes lambda F is not significant (p <0.05) and the premise regression slope homogeneity is established.

Table 3. **Levene's Test of Equality of Error Variancesa**

Dependent Variable: Posttest			
F	df1	df2	Sig.
0.279	1	28	0.602

Tests the null hypothesis that the error variance of the dependent variable is equal across groups. a. Design: Intercept + Pretest + Group

Table 4. **Regression slope homogeneity test**

Tests of Between-Subjects Effects					
Dependent Variable: Posttest					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2075.824a	3	691.941	10.474	0.000
Intercept	20.713	1	20.713	0.314	0.580
Group	8.594	1	8.594	0.130	0.721
Pretest	219.285	1	219.285	3.319	0.080
Group * Pretest	0.735	1	0.735	0.011	0.917
Error	1717.643	26	66.063		
Total	55378.000	30			
Corrected Total	3793.467	29			
a. R Squared = .547 (Adjusted R Squared = .495)					

Further, as shown in Table 5, the differences between the subjects in the experimental and control groups were examined based on perceived stress and ANKOVA analysis by pre-test control.

Table 5. **ANCOVA analysis**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Powerb
Corrected Model	2075.089a	2	1037.545	16.302	0.000	.547	32.605	0.999
Intercept	21.100	1	21.100	.332	0.570	.012	.332	0.086
Pretest	218.556	1	218.556	3.434	0.075	.113	3.434	0.431
Group	1964.761	1	1964.761	30.871	0.000	.533	30.871	1.000
Error	1718.377	27	63.644					
Total	55378.000	30						
Corrected Total	3793.467	29						

Tests of Between-Subjects Effects

Dependent Variable: Posttest

a. R Squared = .547 (Adjusted R Squared = .513). b. Computed using alpha = ,05

As shown in Table 5, there is a significant difference between the subjects in the experimental and control groups based on perceived stress with pre-test control (F = 30.871) and p<0.05). In addition, ETA square indicates that 53% (0.533) of the variance in perceived stress is explained by an independent variable, i.e., the compassion-focused group therapy. Therefore, it is concluded that compassion-focused group intervention has reduced the perceived stress in coronavirus epidemic conditions in the experimental group.

Discussion and conclusion

The results of data analysis related to this hypothesis indicated that compassion-focused group therapy was effective in reducing perceived stress in coronavirus disease by 53% (p<0.5). This finding was consistent with the results of research conducted by Baharvandi et al., inidicating that compassion-focused therapy can improve various aspects of health and well-being of individuals, as well as the research conducted by Alizadeh and Saffarinia and Shabahang, Zhang, Rong Huang, and Rabiaah-Al, which addressed various aspects of stress on Covid-19. The epidemy and high prevalence of Covid-19 has caused home quarantine and limited economic, social, cultural, recreational activities, etc., and disrupted a person's routine compared to before. As a result, the power of forecasting and planning in people decreased, and consequently, the control over the flow of life is reduced, and this situation causes a feeling of insecurity, which is considered as one of the basic human needs, And Maslow defines it as the power of predicting the future (32,33,34). The component of intolerance to ambiguity is considered as a common and transdiagnostic factor which plays a role in a variety of emotional disorders such as anxiety and stress (35). In a condition of an emerging coronavirus disease, the states one experiences include fear of death for oneself and loved ones, anxiety due to uncertainty and ambiguity, anger over injustice, grief over the loss of life, and other unpleasant emotions such as self-criticism. Compassion therapy creates and develops new positive thoughts, emotions, and behaviors that contrast with the negative thoughts and emotions involved in stress. Compassion requires balanced and conscious responses to grief, not avoiding or reinforcing distressing feelings and maintaining sobriety and fair judgments in the face of unpleasant experiences and optimism about life in the present, instead of shunning individual problems and disadvantages (36). In addition, it indicates that thoughts, external factors, images and soothing behaviors should be internalized, and in this case, the human mind, as it reacts to external factors, is calmed in the face of such internalities (37). Increased compassion acts as a shield against negative effects such as Covid-19 disease. People with high self-esteem are less self-conscious, less self-centered, and more comfortable with problems related to coronavirus disease and its devastating effects, consisting of stress and strain, and their judgments about the disease and their judgments of the disease do not lead to self-defense, self-criticism, and self-blame (38). During the training, the subjects in the experimental group learned to accept and understand the stress and negative situations caused by the psychological pressure resulted from Covid-19 epidemic, and to maintain their non-judgmental state along with these unpleasant emotions, instead of automatically avoiding negative emotions and situations. This process takes place in intervention session exercises and such exercises are performed over and over again in daily life, promising to improve the level of stress in the Covid-19 epidemic.

Limitations and suggestions

This research was conducted in the community of academic women, and it is suggested that such studies be conducted in other areas to determine the health and implementation priorities of the same areas. Due to the epidemic conditions, this study was conducted in absentia and through virtual networks, and some people did not have the ability or access to use virtual networks who did not succeed in participating in this research. In addition, the researcher did not supervise over the research implementation sufficiently. The dynamic and changeable nature of research variables was one of the most important limitations in research conclusion. Therefore, it is necessary to consider this dynamic and repeat it at appropriate intervals to clarify the changes in stress in the epidemic of Covid-19 and the factors affecting it.

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