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The effectiveness of acceptance and commitment therapy on prolonged grief disorder and reducing distress in bereaved female nurses due to Corona

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Abstract

This research aimed to investigate the teaching of therapy based on acceptance and commitment to grief disorder and distress among female nurses bereaved by the coronavirus in the Faculty of Nursing and Midwifery of Shahid Beheshti University of Medical Sciences, Tehran. The present study was a quasi-experimental design of pre-test-post-test type with a control group. The test sample included 30 bereaved female nurses in 2020. They were selected by the available sampling method and were placed in two experimental and control groups. The experimental group underwent 8 sessions of 60 minutes under Hayes' (1986) acceptance and commitment therapy training. To collect data, the scale of distress (educational presence, social presence and cognitive presence), Kessler et al. (2002), and grief questionnaire (1975) were used for female nurses bereaved due to Corona due to the spread of coronavirus online. The data were analyzed using multivariate covariance analysis in the two stages of post-test and follow-up, significance level $p < 0.05$. The results in the post-test and follow-up stage showed that the therapy training group based on acceptance and commitment was significantly effective on the components of distress and disorder to prolonged grief. Based on the results of this study, it seems that by teaching treatment based on acceptance and commitment, it is possible to reduce the amount of distress and disruption caused by prolonged grief caused by Corona.

Keywords: *Therapy based on acceptance and commitment, distress, grief, corona*

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Introduction

The new coronavirus, which the World Health Organization mentioned to ncov, is a virus similar to acute respiratory syndrome (SARS), which is transmitted from one person to another through respiratory tract secretions and also through air particles. It can cause respiratory discomfort. These discomforts may be as severe as a mild cold or as severe as pneumonia. In addition to the death of hundreds of thousands of people, the spread of the coronavirus led to the quarantine of many cities and countries in the world. In addition, it led to the long-term closure of many organizations, disruption and problems in the production of many goods, fundamental changes in consumption patterns and fundamental changes in relationship patterns at the individual, interpersonal, organizational, national and international levels. Following the widespread crisis of the corona virus in different parts of the world, the spread of the corona virus in Iran was officially confirmed in February 2019. Since March 2019, the situation in Iran has been alerted. However, according to some experts, since January, patients with symptoms of the coronavirus have visited treatment centers, which were not diagnosed due to the new emergence of the disease. The high contagion rate and unbridled dissemination caused countless concerns in most parts of the world (Bahmani, 2020).

One of the variables that has affected the bereaved people due to Corona in the nursing profession is the distress caused by it. Since moral distress is a common and serious problem in the nursing profession, therefore, knowing the factors that cause this problem in nurses, especially in relation to moral problems, can help this group to fulfill their professional duties. In this regard, Rushton

(2006) states that people's experiences of stressful situations can play an important role in their professional development and improvement, and with education and awareness of positive values, it can lead to improving the quality of patient care. The results of the research conducted in this field indicate that 67% of the nurses in the specialized care department experienced distress. Constant distress and sadness cause discouragement from professional life, decrease in job satisfaction, job burnout, dislike of work, decrease in job retention, change in job status, leaving the profession, and ultimately interaction with the patient and family and intensifying the shortage of nursing staff. Studies have shown that anxiety and sadness in nurses endanger patient care and may be seen in behaviors such as withdrawing from patient care. Likewise, nurses experience frustration, anger, and discomfort and cannot meet patients' needs, and some feel unable to perform their duties and obligations towards patients. The intensity of distress and sadness increases with the improvement of the description of nursing duties and increasing the responsibility of nurses in caring for corona patients because in the specialized departments and special care of Corona, in addition to physical stress, nurses are facing severe psychological pressure. They often face the need to make ethical decisions in the care and treatment of patients in a disordered state. The confrontation of nurses with these urgent conditions causes distress and sadness to increase in them (Shafipour et al., 2020). One of the variables that have affected the bereaved people due to Corona in the nursing profession is the prolonged grief disorder caused by it. Grief is a state of intense internal sadness and discomfort in response to the loss of a person or a specific opinion

and thought, and a set of feelings, thoughts, and behaviors that moves inside when a person is faced with a loss or a threat (Dyrogrov & Yule, 2019). It includes symptoms such as sadness of separation, a feeling of disbelief in the deceased person's death, numbness, and a sense of the meaninglessness of life (Peterson et al., 2020). Due to this disease's relatively high death rate, many people are losing their lives due to the spread of the coronavirus. It causes anger in individuals and families. Empathy is more likely in situations of sudden death, the death of a spouse or child, understanding one's suffering, and feeling guilty because one may be involved in another person's death. Lack of social support, history of psychiatric diseases or lack of understanding of what happened shows itself to long-term or abnormal grief reactions. It can also affect a person physically, emotionally, psychologically, behaviorally and spiritually. In addition, it can lead to negative health consequences such as anxiety, depression, cognitive disorders, loneliness, social isolation and PTSD (Tafthin et al., 2021). If left untreated, these psychological symptoms may have long-term health effects on patients and require treatments that add to the cost of disease management (Mandir, 2021). There are many risk factors and possible grief during the corona outbreak. It seems that the probability of people suffering from prolonged grief is high, so identifying and treating it is important and necessary.

One of the variables that play a role in distress and sadness is psychological treatment. Several psychological treatments were invented over the years to treat psychological problems in addition to drug treatments. However, in two categories of psychotherapies known as third-wave treatments, many psychologists have been

paying attention, one of which is commitment and acceptance therapy (ACT). The theoretical foundations of ACT are based on the theory of functional contextualism, which is the philosophical basis of the theory of mental relation framework. This theory points out humans can free themselves from negative emotions or turn away from them by using language abilities. Based on the above theory, the ACT method emphasizes this point: psychological distress in people is the product of trying to control or avoid negative thoughts and emotions. In other words, in ACT, therapists are advised to accept what is out of personal control and pay attention to actions, behaviors and activities that make life better without prejudice (Hayes, Plump-Willardja, Willat, 2019). The most important principle in ACT is to draw a person's full attention to the current moment-to-moment experience, accept, without judgment, the present experiences and create the ability and psychological flexibility to carry out productive and effective activities in line with meaningful personal values, despite the existence of many sufferings. (Wetherell, Liu, Peterson and Afari, 2020).

For this reason, therapists consider the ultimate goal of ACT to help patients to achieve a more valuable life through the six central processes of acceptance, cognitive dissonance, connection with the present, self as context, values and committed action. Although the ACT method was used for the first time to treat physical pain, it has been used in different fields and in different populations in the last two decades and has a high empirical support. Some studies have shown that ACT is one of the effective treatment methods in improving people's distress and sadness. In general, the above investigations proved, on the one hand, that

distress and disruption to the grief of bereaved people play an essential role in their recovery and can cause psychological disorders in interpersonal relationships. On the other hand, most researches pointed out their research limitations, the effectiveness of ACT on distress and grief disorder is strongly influenced by cultural differences and religious issues, and caution should be observed in generalizing it to other societies. In our country, Georgia, much research has been done on the effectiveness of ACT on multiple variables. However, there are no or very few studies that investigate the effectiveness of ACT on prolonged grief disorder and distress in the community of bereaved nurses due to Corona. Therefore, this research is trying to answer the question of whether ACT is effective on prolonged grief disorder and the distress of bereaved nurses.

Method

This research is a quasi-experimental and practical type that was conducted with a pre-test-post-test design with a control group. After determining and randomly replacing the experimental and control groups, ACT treatment sessions were applied to the experimental group, which was actually performed before the exercises in the pre-test group and after the exercises in the post-test group. The statistical population includes all female nurses who were bereaved due to Corona in the Faculty of Nursing and Midwifery of Shahid Beheshti University of Medical Sciences in Tehran in 2020. With the available sampling method and according

to the research design (quasi-experimental), a sample of 30 people was selected. Then, the subjects were assigned to two experimental groups, 15 people and control, 15 people. Data analysis in this research was done using covariance analysis, following statistical assumptions such as Levin's test and Shapiro-Wilks test using SPSS version 26.

Materials

Grief questionnaire. The grief questionnaire is considered a multidimensional measure of grief that is sensitive to the longitudinal evolution of the grieving process published in 1975. This test is designed to determine whether you are suffering from complicated grief due to the death or loss of a loved one.

Distress Questionnaire. The psychological distress questionnaire was designed and developed by Kessler et al. (2002) to measure mental disorders. It has been validated in Iran by Yaqoubi (2015). This questionnaire has 10 questions and three components of educational presence, social presence and cognitive presence. Psychological distress is measured based on a four-point Likert scale with questions such as (During the past month, how often did you feel tired without a convincing reason?). Validity deals with how well a measurement instrument measures what we think it is. Professors and experts in this field have confirmed the validity of the psychological distress questionnaire.

ACT protocol. Act sessions in the test group include creating a therapeutic alliance as follows.

Table 1: Content of acceptance and commitment therapy

Session	Content
1	Introducing creative helplessness and control strategies against distress
2	Introducing creative helplessness and control strategies against grief
3	Desire and acceptance of distress and sadness as a pure suffering

4	Cognitive impairment
5	Measuring the patient's ability to cognitively separate thoughts and feelings associated with distress
6	Distinguishing the conceptualized self versus the observed self
7	Specification of values
8	Committed action in line with the values and goals of the previous meetings

Findings

In this part of the research, hypotheses about the parameters of society, whose data and information were collected by sampling method. In order to understand the existence of difference or lack of difference and

influence between two variables, we tested hypotheses by using the MANCOVA method, multivariate analysis of covariances, and the generalizability of the obtained results to the whole society was discussed.

Table 2. Mean and standard deviation of distress and grief

Variables	Group	Pre-test		Post-test		Follow-up	
		Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
Educational	Control	6/07	1/16	6	1/81	5/44	1/8
	Experimental	4/6	1/4	3/87	2/06	5	2/42
Social	Control	3/27	1/9	3/33	0/97	3/62	1/5
	Experimental	3/47	1/4	3	1/19	3/13	1/8
Cognitive	Control	3	1/06	2/93	1/48	3/15	1/28
	Experimental	3/33	0/97	1/07	1/03	3/47	1/4
Grief	Control	3/5	1/32	2/89	1/52	3/65	1/02
	Experimental	3/30	0/86	1/21	1/12	3/28	1/62

In Table 2, the components of descriptive statistics, including the mean and standard deviation for the components of educational attendance, cognitive attendance, social attendance, and grief in the pre-test, post-

test, and follow-up phases, are reported. As can be seen, the means of the components decreased during the post-test and follow-up stages.

Table 3. Normal distribution of research variables

Variable	Group	Pre-test		Post-test		Follow-up	
		Statistic	sig	Statistic	sig	Statistic	sig
Educational	Control	0/87	/1030	0/768	/1470	0/94	0/45

	Experimental	0/904	0/11	0/93	/2710	0/905	/1140
Social	Control	0/94	/4210	0/839	/1240	0/929	/3310
	Experimental	0/866	/2970	0/926	0/24	0/936	/3320
Cognitive	Control	0/934	/3160	0/88	/4770	0/879	0/07
	Experimental	0/85	/7310	0/918	/1810	0/945	/4450
Grief	Control	0/754	/3980	0/73	/4320	0/740	/0730
	Experimental	0/68	/3450	0/70	/0720	0/652	/3200

Table 3 shows that in this study, the significance level of the test was greater than the 5% error. In other words, the condition; $\text{sig} > \alpha = 5\%$ is established. Therefore, the null hypothesis that these factors are normal is

confirmed. In other words, the hidden variables of the research have a distribution corresponding to the normal distribution and it is possible to use parametric methods.

Table 4. M-Box test

BOX·SM	F	df ₁	df ₂	SIG
130/36	1/43	55	2531/77	0/198

According to the M-box test ($F=1.43$) and the significance level of the test (0.198), which is greater than the 5% error, the null

hypothesis of the homogeneity of the variance-covariance matrix is confirmed.

Table 5. Effects of between-group regression slope test for distress and grief

Variable	Source	Sum of squares	df	Mean square	F	sig
Educational	Pre-test *group	13/27	2	6/63	1/63	0/208
Cognitive	Pre-test *group	1/78	2	0/89	0/34	0/712
Social	Pre-test *group	8/14	2	4/07	2/68	0/081
Grief	Pre-test *group	6/70	2	3/43	2/31	0/154

According to the results of Table 5, the interaction effect (group and pre-test educational, social and grief attendance subscales) in the post-test stage has significant levels greater than 5% error (p -

value $> 5\%$). Therefore, the assumption of homogeneity of the regression slopes is also established, so it is possible to use multivariate covariance analysis.

Table 6. Levene's test

Variable	F	df ₁	df ₂	Sig
Educational	0/808	2	28	0/453
Cognitive	0/300	2	28	0/742
Social	2/502	2	28	0/094
grief	2/103	2	28	0/543

According to Table 6, the significance levels for Levene's test in each subscale had a value greater than 5% error. Therefore, the assumption of homogeneity of error variances is accepted for the control group and the experimental group, and this assumption is one of the 4 assumptions

necessary to perform multivariate covariance analysis. Considering the establishment of the necessary presuppositions for implementing MANCOVA analysis, it is possible to use the method of multivariate covariance analysis.

Table 7. MANCOVA results

Test	Value	F	df	Df error	Sig.	Effect size
Pillai's trace	1/29	6/036	20	66	0/00	0/647
Wilks' Lambda	0/125	5/86	20	64	0/00	0/647
Hotteling's trace	3/67	5/69	20	62	0/00	0/648
Roy's largest root	1/98	6/55	10	33	0/00	0/665

According to Table 7, the relevant multivariate statistics all show the significance of the multivariate covariance analysis. Therefore, the educational method of treatment based on acceptance and commitment has been effective on the linear combination of these subscales.

Discussion

The present study was conducted in order to determine the therapeutic training based on acceptance and commitment on the distress and grief of nurses bereaved by Corona in the Faculty of Nursing and Midwifery of Shahid Beheshti University of Medical Sciences, Tehran.

The covariance analysis results show a significant difference between the mean scores of the sub-scales of educational presence, social presence, and cognitive presence in the post-test stage after

controlling the effect of the pre-test between the experimental and control groups. In other words, the method of teaching therapy based on acceptance and commitment significantly affected the indices of distress and grief. Considering the value of eta squared correlation, it can be acknowledged that the most effective was the grief subscale, and the least effective was the structure of educational attendance.

The present study's findings are consistent with the results of Patterson et al.'s research (2009). In the explanation of this finding, in a bereaved situation, the relationship of distress to the extent that the nurses' thoughts about the evaluator are uncomfortable and affects its severity. On the other hand, clarifying the values of the relationship and committing to the practice of ways of adapting to these values provides an

opportunity for nurses to choose a behavior that leads to satisfaction, improves distress and reduces psychological and interpersonal distress. Nurses in this study practiced clarifying values through experiential exercises in-session and by completing worksheets outside the session. They reported that the clarification of values was effective in increasing their mental state in life. They have begun to see more clearly the importance in the lives of nurses. They also became aware of what is important to nurses in their life situations. This allowed nurses to notice behaviors that provoke unpleasant reactions in life. As a result, they do not choose problematic behaviors and respond more calmly to unexpected situations. Recognizing the value of unforeseen situations is associated with an increase in situational awareness and action toward values and is more likely to explain the long-term changes observed in the data. Conducting experiential exercises between sessions of each bereaved nurse is an important part of treatment based on adaptability and commitment. By performing these exercises by nurses, each bereaved nurse receives insight and immediate feedback from his experience.

It is suggested that this study be done by removing the limitations and with a larger sample size to increase both the accuracy of the results and the generalization of the findings. It is also suggested to use the treatment based on acceptance and commitment as a therapeutic intervention along with other treatment and rehabilitation methods in order to reduce the distress and grief of bereaved nurses caused by Corona. Finally, it is suggested to teach people how to release the central processes of thought inhibition and get rid of disturbing thoughts in ACT treatment. In this treatment, people

learn to accept their feelings so that they distance themselves from them and address their thoughts and thought processes through more mindfulness and connect them in the direction of goal-oriented activities.

Ethics

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

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Conflict of Interest

According to the authors, this article has no financial sponsor or conflict of interest.

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