The Effectiveness of Existential Therapy Intervention on Anxiety Caused by Coronavirus and Death

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Abstract

The coronavirus outbreak developed a worldwide critical public hygiene issue that threatens physical and mental health and public safety. The present research aimed to address the effectiveness of the existential therapy approach on the anxiety caused by death and the coronavirus in the victims' families. The current research was a clinical semi-experimental study with a pre-test and post-test design and a control group. The study's statistical population included all clients who visited Isfahan's Welfare Organization in the last semester of 2020. From this population, a sample of thirty clients who satisfied the research entry criteria was selected using the convenience sampling method, and the members were divided into an experimental and a control group. Then, the control group received a ten-session existential treatment. The examinees were assessed using the Death Anxiety Scale and the COVID-19 Anxiety Scale. Eventually, the data were analyzed using descriptive statistics (the mean and the standard deviation) and inferential statistics (covariance Analysis and Multivariate Repeated Measures Analysis of Variance) using SPSS. The research findings indicated that the effectiveness of existential psychotherapy intervention in decreasing the physical anxiety resulting from the coronavirus was not significant. However, it effectively reduced the mean dimensions of the anxiety caused by death and the mental anxiety resulting from the coronavirus (P >000/1).

Keywords: *Existential therapy, Death anxiety, Coronavirus*

Introduction

China reported to the WHO an outbreak of a disease caused by the coronavirus with intense pneumonia symptoms from Wuhan on December 31, 2019 (Alavi Moqaddam, 2020). COVID-19 was caused by a new type of coronaviruses that had not been observed before. The virus was zoonotic, meaning it was transmitted from animals to humans. The WHO reported that so far (June 29, 2020, 08:17), 10,004,707 have contracted the virus, 499,619 people have died because of it, and the trend is still increasing (Chinazzi, Davis, Ajelli, Giaonnini, Litvoniva, & Merler, 2020). The existing literature indicated that people might suffer from psychotic symptoms, suicide thoughts, fear, and anxiety during a pandemic (Tucci, Moukaddam, Meadows, Shah, Galwankar & Kapur, 2017). The complexity and the unfamiliar nature of the coronavirus, its rapid transmission, fear of the pandemic and death, anxiety about one's future, intense economic recessions imposed on countries, and doubts about the actions to fight the disease and the availability of the necessary medical facilities were among the numerous causes of anxiety in people.

"WHO" reported that too much anxiety weakened one's immune system and significantly increased the risk of contracting the virus (WHO, 2020). Media and healthcare systems focused on controlling the pandemic, though the

issues related to mental health that were increasing similarly were generally ignored (Amirmoghannibashi, 2020). Though Iran has had an acceptable performance in controlling the disease compared to other countries, its increasing trend has not been stopped yet. Though it may seem that the immediate control of the virus is the most significant action, ignoring humans' mental will bring about an outbreak of mental disorders – particularly anxiety – that can reduce their resistance to the disease and increase their vulnerability to it (Zandifar & Badrnam, 2020).

Anxiety is a prevalent symptom among patients with chronic respiratory disorders and can significantly decrease their quality of life. Clinical anxiety is observed among two-thirds of the patients suffering from chronic respiratory diseases and reduces the quality of their lives and physical performance. Few studies have been conducted on the anxiety experiences of patients suffering from intense respiratory diseases like COVID-19 (Alipour, Ghadami, Alipour, & Abdollahzadeh, 2020). The scarce scientific information about the virus intensifies the related anxiety (Bajema, Oster, & McGovern, 2020). At the time, people seek more information to remove their anxieties. It is surprising that a virus pandemic – particularly concerning infectious diseases – can significantly increase anxiety so much that profound disorders may be observed in many people's behavior and mental well-being. Stress and anxiety that result from COVID-19 can weaken one's immune system and make one vulnerable to other diseases . Consequently, patients and their families need to acquire strategies to oppose anxiety due to their direct contact with the disease and the close observations of its complications and issues.

Death anxiety is a prevalent mental complication among patients with COVID-19 and their family members that is also considered a widespread form of chronic stress. This type of anxiety can be considered a significant psychological symptom in patients with COVID-19. Experiencing moderate amounts of death anxiety is normal; nevertheless, people's efficient harmony gets impaired if it gets intensified. Thus, death anxiety can influence existential health and particularly people's mental health. Death anxiety refers to a feeling of fear, panic, or anxiety when a person thinks about the process of dying, the cessation of the passage of time, and what happens after death (Folk, Loya, Alexoudis, Tangney, Wilson & Barboza, 2018). Medical units focus on stabilizing their patients' physical symptoms in most cases. However, the patients become afraid of pain, loneliness, suffering, and reduced control (all identified as aspects of death anxiety) when the disease and its symptoms progress. The death anxiety of such people can influence their quality of life by interfering with their mental aspects.

The death of the COVID-19 patients is an incident that any family may experience due to the spread of the coronavirus. Though other people's care and attention can help grieving family members deal with the psychological blow and difficult time naturally and patiently, social distancing measures, problems in holding funeral ceremonies, and the absence of friends and caring people during such difficult times prevent the grieving families from passing the stage usually. This increased the risks of depression and anxiety among them.

Psychotherapists implement different approaches like cognitive-behavioral therapy, cognitive-existential therapy, mindfulness techniques, and the existential approach (among others) to alleviate stress and anxiety. The existential approach intends to discover a meaning for human life, and it has brought significant changes to reduce death anxiety and accelerate individual progress. Existentialists argue that the process of change always requires humans to allow the elimination of some parts so that an opportunity can be obtained for new development (Namjou, 2017). The nature of the existential approach has turned it into a promising candidate to improve the characteristics related to anxiety (Bauerib et al., 2018). The goal of the approach is to maintain an actual presence in existence. In other words, it helps people to establish sincere and real relationships with life and its related phenomena and concentrate on their existing relationships with others instead of focusing on external problems (Vos, Craing, & Cooper, 2015). Thus, the present study aimed to investigate the efficiency of the existential therapy approach on the anxiety caused by death and the coronavirus among the victims' families.

Method :

The current study used a pretest-posttest design with a control group. The population included all family members of the victim of COVID-19 who had visited the Welfare Organization of Isfahan, Iran, in the summer of 2020. The sample size for each group was determined at 15 members, and the participants were selected using the convenience sampling technique. The entry criteria included having at least primary school education, being above 20 years old, living with the victim in the same house, the passage of at least 30 days from the death of the victim, the lack of any history in terms of existential therapy, scoring equal to or above the cut-off score of the questionnaires, and the absence of any simultaneous psychological treatments. Moreover, the exclusion criteria included being absent for two or more sessions, inability to collaborate during the sessions, and the participant's withdrawal from the study. The researcher randomly placed 30 visitors to the Welfare Organization of Isfahan based on the entry criteria into a control and an experimental group (each group including 15 members). The experimental group received ten sixty-minute sessions of existential therapy, while

the control group was placed on the waiting list to receive the intervention. The intervention introduced to the experimental group was created by Sadri Damirchi and Ramezani (2017) according to the theories of Frankl (1986) and May (1977) by considering the contents of the investigated components (Table 1).

The researcher implemented the existential intervention in the summer of 2020. The sessions were held twice a week and included lectures, group discussions, and the practical practice of the skills. In addition to demographic information, including age, gender, and the history of diseases, the questionnaires on death anxiety and COVID-19 anxiety were implemented.

Table 1. The contents of the existential therapy sessions

Session	Content of the session
One	**Introduction, stating the goals and laws of the sessions, providing a brief introduction of existential therapy, and assigning the task of providing a list of personal characteristics**
Two	**Challenging the participants' responses to questions like "Who am I? How do I perceive life?" Discussing the concept of self-consciousness, receiving the participants' viewpoints about that concept, explaining self-consciousness and other concepts that are pivotal to the existential therapy intervention, and determining assignments according to the content of the session**
Three	**Checking the assignments and reviewing the content of the previous session, teaching the "timeline" technique, discussing and implementing it, receiving the participants' viewpoints about death and challenging them, determining assignments based on the contents of the session**
Four	**Checking the assignments and reviewing the content of the previous session, investigating the participants' experiences concerning the loss, diseases, the causes of death, and grief, providing convenient feedback, exposing the participants to death and contagious disease like COVID-19 imaginatively, explaining the role of death in one's life by the collaboration of the participants, and preparing their death notice or that of their essential figures in life**
Five	**Reviewing the previous session and focusing on the participants' feelings while they perform the assignments of the previous session, explaining concepts like freedom, freedom of choice, and constraints, receiving the participants' experiences in terms of challenging freedom of choice situations during a pandemic and the causes of death, explaining the relationship between freedom and responsibility, and determining some assignments**
Six	**Checking the assignments of the previous session, checking the participant's responses to questions like "Am I a lonely human being? Is loneliness distressing?" and challenging them, explaining the concept of loneliness according to the existential therapy intervention, making concluding remarks and determining assignments for the participants**
Seven and eight	**Reviewing the assignments of the previous session, checking the participant's responses to questions like "Does life have a meaning and direction? What do I live for?" and challenging them, receiving the participants' experiences regarding vanity and uselessness in life, concluding the discussions of the session**
Nine	**Discussing the factors that influence feelings and thoughts using imagery and imagining a success/failure situation, responding to questions like "Who is responsible for that? How do you feel about that? How do you feel that you take responsibility for your actions?", making concluding remarks by the help of the participants using the themes like death and illness**
Ten	**Explaining the discussions of the previous sessions, explaining the relationship between self-consciousness, loneliness, freedom, responsibility, illness, death, and vanity with the participants' assistance, pointing to the group process from the beginning to the end, and disbanding the group**

A questionnaire was distributed to collect the participants' demographic information. It included information like age, gender, education, and the history of systemic diseases. Moreover, the obtained data were analyzed by the multivariate covariance analysis using SPSS 22.

Instrumentation:
 The fear of death scale

The measurement of death anxiety was performed using the Collett-Lester questionnaire. Collett and Lester developed the initial form of the scale in 1969. The revised Collett-Lester scale of death anxiety is a self-report tool to measure death-related fear and anxiety. It includes 32 items classified into four subscales. The subscales are one's death, the anxiety of seeing oneself dying, one's relatives' death, and one's relatives dying (Majidi & Moradi, 2018). Each subscale includes eight items scored according to a 5-point Likert scale from 1 (very low anxiety) to 5 (very high anxiety). The scores of each subscale range from 8 to 40, and the range of the total score is 32 to 160. Naderi and Esmaeili (2008) implemented it for the first time in Iran and determined its Cronbach's Alpha coefficient at 0.89. Zuccala and Abbott (2021) determined its Cronbach's Alpha coefficient at 0.90. Moreover, the Cronbach's Alpha coefficients for one's death, observing one's death, others' death, and observing others' death were determined at 0.67, 0.71, 0.59, and 0.70, respectively.

The corona disease anxiety scale

The corona disease anxiety scale by Alipour et al. was implemented to measure the anxiety resulting from COVID-19. The scale was developed and validated by Alipour et al. (2020) to measure the anxiety that resulted from the coronavirus outbreak in Iran. The final edition of the scale includes 18 items and two components (factors). Items 1-9 measure mental symptoms, while items 10-18 measure physical symptoms. The items are scored according to a 4-point Likert scale (0=never, 1=sometimes, 2=often, 3=always); higher scores indicate higher anxiety levels among people. Alipour et al. (2020) determined the Cronbach's Alpha coefficients of the scale for the first and second factors at α=0.879 and α0.861, respectively. The Cronbach's alpha coefficients of the mental and physical anxiety of COVID-19 were determined at 0.67 and 0.62, respectively, in the current study (Jani, Mikaeili, and Rahimi, 2020).

Findings:
Analyzing the demographic information indicated that 66.7% and 40% of the examinees in the experimental and control groups were female, respectively; moreover, the remaining examinees were male. Investigating the level of education showed that 73.3% of the participants (in both groups) were graduates, 13.3% of the experimental group and 6.7% of the control group had a primary school and high school certificates, and 13.4% of the experimental group and 20% of the control group were postgraduates. Table 2 illustrates the mean and SD of death and corona anxiety dimensions for each group and test.

Table 2. The mean and SD of the dimensions of death and corona anxiety in the two groups

Component	Experimental group		Control group	
	Mean (SD) of the pretest	Mean (SD) of the posttest	Mean (SD) of the pretest	Mean (SD) of the posttest
One's death	35)/113(/25	14)/120(/21	62)/106(/25	55)/186(/24
Observing oneself dying	59)/146(/22	16)/126(/18	88)/160(/21	80)/161(/21
Relatives' death	55)/113(/24	18)/140(/19	44)/133(/23	57)/193(/22
Observing relatives' death	13)/100(/24	88)/026(/19	17)/166(/23	12)/160(/23
Corona mental anxiety	94)/080 (/12	88)/093(/9	06)/186(/12	05)/160(/12
Corona physical anxiety	18)/146 (/4	03)/126(/4	91)/036(/4	92)/056(/4

As the dependent variable of the present study was a multivariate one, the efficiency of positive psychotherapy on the dimensions of death and corona anxiety was investigated using the multivariate covariate analysis. Thus, first, the assumptions were checked before running the analysis.

The results of Box's M Test to investigate the homogeneity assumption of the variance-covariance matrix confirmed the assumption (Box's = 24.992, $F_{21, 2883/551}$ = 0.991, P=0.576). Then, the homogeneity assumption of the error variance was checked by Levene's test. The obtained F value and the significance level confirmed the homogeneity assumption of the error variance in all dimensions of death anxiety, including one's death (F=0.033, P=0.858), observing one's death (F=0.140, P=0.711), relatives' death (F=0.280, P=0.601), observing relatives' death (F=2.351, P=0.136), the physical anxiety of the COVID-19 (F=1.223, P=0.278), and the mental anxiety of the COVID-19 (F=0.343, P=0.563).

Then, multivariate tests were implemented to investigate the efficiency of the existential therapy intervention on the dimensions of anxiety. The results of Wilks' lambda indicated that the proposed intervention was influential on the dimensions of anxiety (F=176.998, P=0.001, ^{2}η =0.984, value = 0.016). Table 3 illustrates the results of the multivariate covariance analysis to investigate the efficiency of the proposed intervention on the dimensions and death and corona anxiety.

Table 3. The results of the multivariate covariance analysis to evaluate the effectiveness of the proposed intervention on the dimensions of death and corona anxiety

Component	Sum of squares	Degree of freedom	F	Eta squared	Sig.
One's death	135/87	1	013/131	856/0	**001/0**
Observing one's death	269/97	1	292/152	874/0	**001/0**
Relatives' death	040/112	1	587/220	909/0	**001/0**
Observing relatives' death	640/125	1	007/576	963/0	**001/0**
The mental anxiety of the COVID-19	196/40	1	574/113	838/0	**001/0**
The physical anxiety of the COVID-19	238/0	1	673/2	108/0	**116/0**

The results of the multivariate covariance analysis obtained by comparing the experimental and control groups and their post-tests and controlling the effects of the pre-test showed that the effect of the proposed existential therapy intervention was significant in reducing the average dimensions of death anxiety (anxiety resulting from one's death, observing oneself dying, relatives' death, and observing relatives dying) and the mental anxiety from the COVID-19; however, the intervention was not found to have significant effects in reducing the physical anxiety of the COVID-19 (P<0.001).

Conclusion:

The present study aimed to investigate the effectiveness of the existential therapy intervention in reducing death and corona anxiety among the families of the victims of the virus. The findings showed a significant difference between the experimental and control groups' modified post-test means concerning death anxiety. In other words, it was found that the proposed therapy intervention significantly reduced the dimensions of death anxiety and the mental anxiety arising from COVID-19 in the experimental group. The findings of the present study were in line with the findings of Moreton, Szalla, and Menzies (2020), Axelsson, Hesser, Andersson, Ljótsson, and Hedman-Lagerlöf (2020), Kladnitski, Smith, Uppal, James, Allen, Andrews, and Newby (2020), Newby, Kelberg, Hobbs, Mahoney, Mason, and Andrews (2020), Newby and McElroy (2020), Waite, Marshall, and Creswell (2019), Salehi (2019), Parsaee (2019), and Namjou (2017). The above studies found that psychological therapies – particularly existential therapy intervention – could reduce anxiety. For instance, Moreton et al. (2020) concluded that existential therapy plus the prescription of psychiatric drugs effectively reduced death anxiety. Moreover, Waite et al. (2019) investigated the effectiveness of the cognitive-behavioral approach in reducing prevalent anxiety among adolescents and found that the proposed approach was effective in reducing anxiety. Axelsson et al. (2020) found that the combination of mindfulness and cognitive-behavioral therapy effectively reduces depression and anxiety disorders.

A broad spectrum of approaches is implemented in existential therapy, though the focus is on consciousness and insight. The treatment helps people find meaning in their lives in the face of anxiety and mental tensions. It turns existential anxiety resulting from being exposed to the manifestations of mortality and various types of anxiety into a positive and constructive phenomenon with the assistance of consciousness and insight. The fear and anxiety resulting from the probable contracting of illnesses are destructive and can bring about various mental and psychological abnormalities and stress. The stimulation of the hypothalamus creates fear and stress in the brain, and the following increases the secretion of cortisol from the adrenal cortex and the stimulation of the sympathetic nervous system across the body, and it is helpful in the short run to oppose stressors (Barret, Barman, Brooks, & Yuan, 2019). However, suppose such fear and stress and the body's responses, including the increased levels of cortisol and sympathetic stimulation, remain for a long time. It can be destructive and weaken the immune system and the body's resistance to diseases like COVID-19 (Yarbeigi, Panahi, Sahraei, & Sahebkar, 2017). Thus, fighting anxiety – particularly the anxiety that results from the coronavirus contraction–increases society's resistance to the disease.

Most studies in the existing literature have focused on the patient's anxiety. However, pandemics like COVID-19 spread the fear of diseases and death (in addition to the disturbance of daily activities) among all people – particularly among the relatives of a victim of the disease – and involve all healthy people with the anxiety of the disease (Fischhoff, 2020). Nevertheless, the fear of facing financial problems, losing one's job, and suffering from social stigma (among others) can be added to the list. Thus, anxiety arising from COVID-19 will negatively influence a set of people in society. Though the present study indicated the effectiveness of existential therapy on mental anxiety (mental syndrome), such interventions have

not typically been able to reduce or eliminate the physical anxiety (physical syndrome) resulting from the coronavirus. Thus, it can be argued based on the multi-cause or the Biopsychosocial viewpoint that most illnesses have psychosomatic causes since mental factors typically influence physical disorders. As a result, it is possible that the short duration of the therapeutic intervention in the current study slowly revealed the influence of one's psyche on the physical syndrome. Nevertheless, no sign of the effect of the proposed approach on the physical anxiety arising from the spread of the coronavirus among the examinees. Concerning the psychological aspect of anxiety, existential therapists believe that the approach acts as a psychological shield and provides the ground for people to have positive views towards life and death. The psychological anxiety arising from the coronavirus among the family members of the victims can bring about PTSD, remaining in the initial stages of grief, hypochondria, corona-phobia, and intense depression. That is particularly because the family members could not hold funerals with all relatives and acquaintances and did not receive their associates' social support. Thus, the feelings of sorrow and grief remain in such people and severely damage their personality structure and professional, social, emotional, and mental performance. It can be said for the conclusion People learn to find meaning in their lives (despite their illnesses), choose a goal for themselves, exploit the opportunities of life maximally, and take responsibility for their behaviors that led to an illness or other issues during the sessions of existential therapy. Thus, existential therapy can reduce death and corona anxiety among the family members of the disease victims. A limitation of the study was the small population size (only the families of the victims of COVID-19), which constrained the generalizability of the findings to other groups of society. Moreover, gathering the examinees was particularly problematic and challenging due to the exceptional condition of the coronavirus.

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References

1. Moghanibashi-Mansourieh A. (2020). Assessing the anxiety level of the general Iranian population during the COVID-19 outbreak. Asian J Psychiatr. Jun;51:102076. DOI: 10.1016/j.ajp.2020.102076. Epub 2020 April 18. PMID: 32334409; PMCID: PMC7165107. **(In Persian)**

2. Alavi-Moghadam M. (2020). A Novel Coronavirus (COVID-19) Outbreak from Wuhan City in China, Rapid Need for Emergency Departments Preparedness and Response; a Letter to Editor. Archives of Academic Emergency Medicine. 8(1): p. 2645-4904. **(In Persian)**

3. Alipoor A, Ghadami A, Alipoor Z, Abdollahzadeh H .(2020). Preliminary Validation of the Corona Disease Anxiety Scale (CDAS) in the Iranian Sample. Quarterly Journal of Health Psychology. Vol. 8, No. 4, (Series 32). **(In Persian)**

4. Axelsson E, Hesser H, Andersson E, Ljótsson B, Hedman-Lagerlöf E. (2020). Mediators of treatment effect in minimal-contact cognitive behavior therapy for severe health anxiety: A theory-driven analysis based on a randomized controlled trial. Journal of Anxiety Disorders, 69.

5. Bajema KL, Oster AM, McGovern OL. (2020). Persons Evaluated for 2019 Novel Coronavirus United States, MMWR Morb Mortal Wkly .Rep. ePub: February 7. DOI: dx.doi.org/10.15585/mmwr.mm6906e1.

6. Barrett KE, Barman SM, Brooks HL, Yuan J. (2019). Ganong's Review of Medical Physiology. 26th Editon. McGraw-Hill Education.

7. Bauerib N, Obermaier S, Ozunal SE, & Baumeister H. (2018). Effects of existential interventions on spiritual, psychological, and physical well-being in adult patients with cancer: Systematic review and meta-analysis of randomized controlled trials. Psycho-Oncol. 27, 2531-2545.

8. Chinazzi M, Davis JT, Ajelli M, Gioannini C, Litvinova M, Merler S, et al. (2020). The effect of travel restrictions on the spread of the 2019 novel coronavirus (COVID-19) outbreak. Science.

9. Fischhoff B. (2020). Speaking of Psychology: Coronavirus Anxiety. In: https://www.apa.org/research/action/speaking-of-psychology/coronavirus-anxiety.

10. Folk JB, Loya JM, Alexoudis EA, Tangney JP, Wilson J, Barboza SE. (2018). Differences between inmates who attempt suicide and who die by suicide: Staff-identified psychological and treatment-related risk factors. Psychol Serv. 15(3): 349-56.

11. Frankl VE. (1968). Man's Search for Meaning. (Rev. Ed.). New York: Norton. Paperback – June 1, 2006

12. Jaani S, Mikaeli N, Rahimi P. (2020). The effect of Cognitive-behavioral Therapy through the Internet on reducing corona anxiety. Journal of Information and Communication Technology in Educational Sciences, Year 10, Issue 4, pp. 129-145. **(In Persian)**

13. Khamoshi Darmarani T, Moradi O. (2020). Prediction of death anxiety based on emotional self-regulation and self-efficacy in cancer patients. Shenakht Journal of Psychology and Psychiatry. 6 (6): 66-76. http://shenakht.muk.ac.ir/article-1-816-fa.pdf **(In Persian)**

14. Kladnitski N, Smith J, Uppal Sh, James MA, Allen AR, Andrews G, Newby JM. (2020). Transdiagnostic internet-delivered CBT and mindfulness-based treatment for depression and anxiety: A randomized controlled trial. Internet Interventions. Internet Interv, 100310. Published online 2020 February 13. doi:10.1016/j.invent.2020.100310

15. May R. (1977). The meaning of anxiety (Rev. Ed.). New York: Norton

16. Majidi A, Moradi O. (2018). Effect of Teaching the Components of Spiritual Intelligence on Death Anxiety in the Elderly. Salmand: Iranian Journal of Ageing. 13 (1) :110-123. URL: http://salmandj.uswr.ac.ir/article-1-1346-fa.html **(In Persian)**

17. Moreton SG, Szalla L, Menzies RE. *et al.* (2020). Embedding existential psychology within psychedelic science: reduced death anxiety as a mediator of the therapeutic effects of

psychedelics. *Psychopharmacology* 237, 21–32. https://doi.org/10.1007/s00213-019-05391-0

18. Naderi F, Esmaeli E. (2008). [The association Between Death Anxiety, Suicide ideation and well-being in Ahvaz I.A.U Students (Persian)]. Journal of Social Psychology. 2(8):35-52. **(In Persian)**

19. Namjoo, F (2016). The effectiveness of existential group therapy on death anxiety and individual growth of the physically disabled. Dissertation Received Master's Degree, Rehabilitation Counseling. **(In Persian)**

20. Newby J, kelberg H, Hobbs M.J, Mahoney AlEJ, Mason E, Andrews G. (2020). The effectiveness of internet-delivered cognitive behavioral therapy for health anxiety in routine care. Journal of Affective Disorders,264, 535-542.

21. Newby JM, & McElroy E. (2020). The impact of internet-delivered cognitive behavioral therapy for health anxiety on cyberchondria. J Anxiety Disord, 69:102150. DOI: 10.1016/j.janxdis.2019.102150. Epub 2019 October 31.

22. Parsaee M. (2018). The effectiveness of existential group psychotherapy reduces depression and existential anxiety in hemodialysis patients of Shahid Beheshti Hospital in Shiraz. Master Thesis, Clinical Psychology. Islamic Azad University, Marvdasht Branch **(In Persian)**

23. Sadri Demirchi, A., Ramezani, Sh. (2016). The effectiveness of existential therapy on feelings of loneliness and death anxiety in the elderly. Journal of Aging Psychology. 2 (1), pp. 1-12.

24. Salehi M. (2019). The effectiveness of cognitive existential psychotherapy in reducing depression and existential anxiety in response to women's grief. Master Thesis, Family Counseling. Al-Zahra University. **(In Persian)**

25. Tucci V, Moukaddam N, Meadows J, Shah S, Galwankar SC, Kapur GB. (2017). The forgotten plague: psychiatric manifestations of Ebola, Zika, and emerging infectious diseases. J. Glob. Infect. Dis. 9 (4), 151. **(In Persian)**

26. Vos J, Craig M, Cooper M. (2015). Existential therapies: a meta-analysis of their effects on psychological outcomes. J Consult Clin Psychol, 83(1), 115-128.

27. Waite P, Marshall T, Creswell C. (2019). A randomized controlled trial of internet-delivered cognitive behavior therapy for adolescent anxiety disorders in a routine clinical care setting with and without parent sessions. Child and Adolescent Mental Health, 24(3),242-250.

28. World Health Organization (WHO), (2020). Coronavirus Disease 2019 (COVID -19) Situation Report – 69. World Health Organization.

29. World Health Organization (WHO), (2020). Mental Health and Psychosocial Considerations during the COVID-19 Outbreak, March 18, 2020. World Health Organization.

30. World Health Organization. Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV); 2005. [cited 2020 Jan 30] Available from: https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov)

31. Yaribeygi H, Panahi Y, Sahraei H, Johnston TP, Sahebkar A. (2017). The impact of stress on body function: A review. EXCLI Journal. 16: 1057–72.

32. Zandifar A, Badrfam R. (2020). Iranian mental health during the COVID-19 epidemic. Asian J. Psychiatr. 51, 101990. **(In Persian)**

33. Zuccala M, Abbott MJ. (2021). Social Anxiety Disorder and the Fear of Death: An Empirical Investigation of the Terror Management Approach towards Understanding Clinical Anxiety. Cogn Ther Res. https://doi.org/10.1007/s10608-0