Theoretical and Review Articles // Artículos teóricos y de revisión

Research Articles // Artículos de investigación

Notes and Editorial Information // Avisos e información editorial

ISSN 1577-7057

Volume 21, number 3 October 1, 2021
Volumen 21, número 3 1 Octubre, 2021

ISSN: 1577-7057

IJP&PT

International Journal of Psychology & Psychological Therapy

https://www.ijpsy.com

International Journal of Psychology & Psychological Therapy
https://www.ijpsy.com

Volume 21, number 3, October 1, 2021
Volumen 21, número 3, 1 Octubre, 2021

Theoretical and Review Articles // Artículos teóricos y de revisión

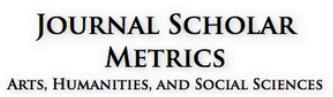
Research Articles // Artículos de investigación

Notes and Editorial Information // Avisos e Información Editorial

Publicada por/Published by: ***Asociación de Análisis del Comportamiento*** **(AAC, Madrid, España) &** ***Madrid Institute of Contextual Psychology*** **(MICPSY, Madrid, España)**

Depósito legal: GR-1332-2001 Printed on / Impreso en**: Copias Centro, Madrid (España)**

IJP&PT is included in the following indexing and documentation Centers



International Journal of Psychology & Psychological Therapy, 2021, 21, 3, 399-411

A Group-based Online Acceptance and Commitment Therapy Treatment for Depression, Anxiety Symptoms and Quality of Life in Healthcare Workers during COVID-19 Pandemic: A Randomized Controlled Trial

Nastaran Otared
University of Mohaghegh Ardebili, Iran
Nasim Ghahraman Moharrampour
Melbourne University, Australia
Babak Vojoudi
Tabriz University, Iran
Amir Jahanian Najafabadi*
Jacobs University Bremen, Deutschland

Abstract

This study aimed to investigate whether Acceptance and Commitment Therapy (ACT) leads to reduced anxiety and depression symptoms in health care workers during the pressure of the covid-19 pandemic. ACT has been developed to improve psychological flexibility, and it has been used on a wide range of psychological disorders. For this study, 40 health care participants had been approached psychotherapy clinics at Tabriz city during COVID-19 and were divided into two groups. One received an ACT-based treatment program, and one had no therapy in this study. All participants were administered by *Beck Depression Inventory, Beck Anxiety Inventory, Quality of Life Index, Global Assessment of Functioning Scale*, and the *Acceptance and Action Questionnaire-II* to assess at pre- and post-treatment level their ratings on such scales. Regarding the results, an ANCOVA analysis revealed a significant effect of ACT to reduce the level of depression and anxiety scores as well as an improvement in quality of life in the treatment group (p <.05) compared with the control group. Based on the present study, we conclude that ACT effectively reduces anxiety and depression, and achieves an improvement on the quality of life among health workers in this study and can be applied as efficient psychological treatment.
Key words: Acceptance and Commitment Therapy, Anxiety, Depression, Quality of Life, Healthcare, Covid-19.

How to cite this paper: Otared N, Moharrampour NG, Vojoudi B, & Jahanian Najafabadi A (2021). A Group-based Online Acceptance and Commitment Therapy Treatment for Depression, Anxiety Symptoms and Quality of Life in Healthcare Workers during COVID-19 Pandemic; A Randomized Controlled Trial. *International Journal of Psychology & Psychological Therapy, 21, 3,* 399-411.

Novelty and Significance

What is already known about the topic?

- Literature on anxiety and stress suggests that healthcare providers are at high risk of having disorders such as high levels of depression and anxiety.
- While physicians, nurses, and medical assistants on the front lines of the COVID19 epidemic may be more vulnerable to developing mental health disorders, there have been no considerable attempts towards the exam of psychological interventions all along with the COVID-19 pandemic.
- Research shows that the components of psychological inflexibility can play a crucial role in the psychopathology process of individuals with depression and anxiety disorders.

What this paper adds?

- This study supports a short-term and transdiagnostic therapy to help healthcare professionals who are in direct contact with patients of the novel Coronavirus.
- By enhancing participants' awareness and acceptance, ACT helps them identify their values and find constructive ways to improve the quality of life during the COVID-19 pandemic.

* *Correspondence*: Amir Jahanian Najafabadi, Campus Ring 1, Research 4, Room 114, Jacobs University Bremen, 28759 Bremen, Germany. Email: a.jahaniannajafabadi@jacobs-university.de. *Acknowledgments*: The authors thank all the interested participants who accepted to be voluntarily part of this study

The outbreak of COVID-19 as a pandemic that started in Wuhan, China, in December 2019 was an unprecedented and dramatic turn of events for health care workers worldwide (Huang *et alia*, 2020). The World Health Organization (WHO) announced COVID-19 as a pandemic on March 11, 2020 (Huang *et alia*, 2020). When submitting this manuscript, i.e., April 28, 2021, WHO had reported 148 M cases of COVID-19, 3.13 M deaths in the world, and 2.44 M diagnosed cases with at least 70,532 deaths in Iran (WHO, 2021). A meta-analysis of promising studies by Sahebi, Nejati-Zarnaqi, Moayedi, Yousefi, Torres, & Golitaleb (2021) showed that 24.94% of health care workers suffered from anxiety, and 24.83% of them experienced depression during the Covid-19 pandemic, which is relatively high. Health providers, especially those who are in direct contact with patients of the novel Coronavirus, are exposed to not only higher risks of Covid-19 infection but also other adverse somatic health consequences (Zhang, Zhang, Wang, Zhu, Wang, & Qiu, 2020; Xiao, Fang, Chen & He, 2020). Moreover, they are reported to experience high levels of stress due to direct contact with infected patients and worrying about their health state, fear of spreading the disease to their families and friends, defamation, increased workload, physical tiredness, insufficient private accouterments, and making ethically difficult choices on the division of care (Mak, Chu, Pan, You, & Chan, 2009; Wu, Fang, Guan, Fan, Kong, Yao, Liu, Fuller, Susser, Lu, & Hoven, 2009).

Previous studies revealed that healthcare workers are at high risk of having mental disorders and report suffering from high levels of depression and anxiety (Pouralizadeh, Bostani, Maroufizadeh, Ghanbari, Khoshbakht, Alavi, & Ashrafi, 2020; Elhadi *et alia*, 2020; Arafa, Mohammad, Mahmoud, Elshazley, & Ewis, 2021). Pappa, Ntella, Giannakas, Giannakoulis, Papoutsi, and Katsaounou (2020) conducted a systematic review of thirteen studies to address the prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 epidemic and reported 23.2% and 22.8% prevalence rates for depression and anxiety, respectively. Hassanian-Moghaddam, Zamani, and Kolahi (2020) concentrated on the prevalence of anxiety and depression symptoms in health providers and common people during the COVID-19 pandemic in Iran. Results indicated that 42.3% of the participants (namely 865 out of 2045 participants) had moderate and severe depression and 1136 (65.6%) had anxiety symptoms. Furthermore, the prevalence of anxiety was reported to be higher among females aged 30-39 years. The prevalence of anxiety symptoms was also shown to be higher in the likely-infected COVID-19 group than the non-infected COVID-19 group. Moreover, compared to other professions doctors and nurses were reported to be more significantly involved with the prevalence of anxiety and depression.

Anxiety and depressive disorders are common damaging disorders that are seen as risk factors for quality of life deterioration (Kessler, Chiu, Demler, Merikangas, & Walters, 2005). They are associated with a variety of problems, including suicide (Kazemi & Javid, 2010), eating disorders (Santos, Benute, Santos, Nomura, de Lucia, & Francisco, 2017), sleep disorders (AlMaghaireh, Abdullah, Chong, Chua, & Kawafha, 2017; Rutten, Vriend, van der Werf, Berendse, Weintraub, & van den Heuvel, 2017), expressive aggression (Khakbaz, Karami, Shafi'e-Abadi, Malmir, Farhadi, 2014), social and educational dysfunction (Kupferberg, Bicks & Hasler, 2016; Al-Quisy, 2011). Recent studies revealed psychological inflexibility as an important risk factor for a wide range of psychological problems such as depression, anxiety, substance use, agoraphobia, blood phobia, trichotillomania, stress, and substance abuse (Hayes, Strosahl, Bunting, Twohig, & Wilson, 2005; Kato, 2016; Masuda, Mandavia, & Tully, 2014; Woodruff,

Glass, Arnkoff, Crowley, Hindman, & Hirschhorn, 2013).

Psychological inflexibility is held to be at the core of ACT as a state-of-the-art therapeutic approach (Hayes, Luoma, Bond, Masuda, & Lillis, 2006) that draws upon functional contextual program of a basic experimental research on human language and cognition, namely Relational Frame Theory (Hayes, Barnes-Holmes, & Roche, 2001). The central goal of ACT is to increase psychological flexibility, which is the ability to be mindful of thoughts, feelings, physical sensations, and other inner experiences at the present moment with a non-judgmental and accepting mindset, and implies behaving consistently with one's values (Levin, Pistorello, Seeley, & Hayes, 2013). Psychological flexibility is defined as the ability to flexibly conform behavior in the direction of long-dated values while accepting unwanted inner experiences (Kashdan & Rottenberg, 2010). ACT relies on six interdependent and overlapped processes to create psychological flexibility: acceptance, diffusion, contact with the present moment, self as context, values, and committed action (Grégoire, Lachance, Bouffard, & Dionne, 2018).

Research shows that the components of psychological inflexibility can play a crucial role in the psychopathology process of individuals with depression and anxiety disorders (Otared, Narimani, Sadeghi, Mahmood Alilou, & Atadokht, 2019a). There has been an increase in the number of trials investigating the efficacy of ACT on psychiatric disorders. Several studies have shown that ACT has effectively impacted anxiety and depression (Sewart, Niles, Burklund, Saxbe, Lieberman, & Craske, 2020; van Aubel *et alia*, 2020; Sianturi, Keliat, & Wardani, 2018). A systematic review of randomized controlled trials (RCTs) testing ACT for depression and anxiety disorders lends basic support for this form of therapy (Twohig, Levin, 2017; Bai, Lou, Zhang, Wu, & Chi, 2020). Research supports the dimensional approach to diagnosis and therapy by identifying psychopathological ACT processes among individuals with emotional disorders (Otared, Narimani, Sadeghi, Mahmood Alilou, & Atadokht, 2019b).

Although Weiner, Berna, Nourry, Severac, Vidailhet, & Mengin (2020) developed a brief online CBT program for healthcare workers during COVID-19, there have been no special attempts to examine psychological interventions and the COVID-19 pandemic (Tran, Ha, Nguyen, Vu, Hoang, Le, Latkin, Ho, & Ho, 2020). The COVID-19 outbreak is causing enormous psychological pressure on people worldwide, particularly on sanitation workers (Hassanian-Moghaddam, Zamani & Kolahi, 2020). Therefore, this study aimed to determine the effectiveness of group-based online ACT on depressive and anxiety symptoms among healthcare workers and increase their quality of life during the COVID-19 pandemic.

Method

Participants

The study population comprised all healthcare workers with anxiety and depression symptoms who had approached psychotherapy clinics at Tabriz city during COVID-19. Both treatment and control group members were chosen via a psychiatric semi-structured diagnostic interview. Participants received necessary information on our therapeutic approach, and the general aim of this study was explained during recruitment, and then intervention started. Twenty participants were randomly selected for online ACT group-based therapy and twenty participants were randomly assigned to a control group who did not receive any treatment and were appointed to the waiting list. Due to the critical circumstances of Covid-19 and the work pressure of health care workers, an

available sampling method for both treatment and control groups was used. The mean age of participants was 33.4 (*SD*= 4.49) and 31.5 (*SD*= 5.35) in the treatment and control groups, respectively. 55% and 45% of participants in the treatment group were men and women, respectively. The control group consisted of an equal number of men and women.

All the participants were selected based on the following inclusion criteria: 1) score of 26-63 for anxiety and 29-63 for depression as an indicator of severe anxiety and depression. 2) High level of distress and/or dysfunctionality indicative of a high level of depression and anxiety based on a clinical interview. 3) Have no history of personality disorders, schizophrenia, bipolar disorder, and substance abuse. 4) Readiness to participate in eight therapy sessions. 5) No changes in psychiatric medication for a month before the study. This study was conducted in compliance with the rules of the Declaration of Helsinki 2013, and clients were asked to read and then signed the Farsi-consent form. The online-based group therapy was done through the Zoom platform.

Instruments and Measures

Beck Depression Inventory 2nd Ed (BDI; Beck, Steer, & Brown, 1996): The questionnaire consists of 21 items. Participants should choose one of the four choices, which shows the degree of depression symptoms relevant to their condition. Each item obtains a point between 0 to 3; thus, the questionnaire's total score ranges between 0 to 63. The questionnaire is used for populations of +13 years. The internal consistency was reported in a range between 0.73 to 0.92, with an average of 0.86, and the alpha coefficient was reported to be 0.86 for the participants and 0.81 for the healthy people (Beck et alia, 1996). In addition, Dabson & Mohammadkhani (2007) obtained 0.92 for out-participants and 0.93 for university students (Fathi-Ashtiani, 2012)..

Beck Anxiety Inventory (BAI, Beck, Epstein, Brown, & Steer, 1988): The questionnaire is a self-reporting inventory that was designed to measure the level of anxiety in adolescents and adults. This inventory contains 21 questions, and participants choose one of the four choices showing the degree of anxiety. The total score ranges from 0 to 63. The inventory's internal consistency index is 0.92, its reliability is 0.75 by the test-retest method with a week as time interval, and the correlation of its items ranges from 0.30-0.76. In an investigation on psychometric features of the BAI within the Iranian population, Kaviani & Mousavi (2008) reported its validity coefficient approximately 0.72, the reliability of the test-retest 0.83, and the Cronbach α as 0.92.

Quality of Life Index (QOLI; Frisch, Cornell, Villanueva & Retzlaff, 1992): QOLI employs a language of a six-grade reading level to measure a person's essential areas of life and level of satisfaction in this area. The areas included are goals and values, self-esteem, health, relationships (in four areas: friends, love, children, and relatives), work, play and joy, helping others, learning, creativity, the standard of living, and social surroundings, i.e., home, neighborhood, and community. The validity and reliability of QOLI have been established by Frisch, Clark, Rouse, Rudd, Paweleck, Greenstone, & Kopplin (2005). Test-retest coefficients for the QOLI range from 0.80 to 0.90, and internal consistency reliability (α= 0.93) and four subscales (α= 0.87, 0.82, 0.90, 0.77). Validity of index is reported 0.75 (p <.001, Ferrans & Powers, 1992).

Global Assessment of Functioning Scale (GAF, Endicott, Spitzer, Fleiss, & Cohen 1976): The GAF measures three dimensions of an individual's life: psychological function, social function, and occupational function. The range of scores is from 1 to 100. A higher score means better parts in life dimensions (Grootenboer, Giltay, van der Lem, van Veen, van der Wee, & Zitman, 2011). Few studies have claimed the GAF to be reliable; inter-rater reliability between the two researchers was excellent (*ICC* coefficients r= 0.81 and 0.85, Vatnaland, Vatnaland, Friis, & Opjordsmoen, 2007). Mental health professionals use the GAF to assess how well an individual is functioning in their daily lives. Therefore, in this research, GAF was used to measure the impact of psychiatric symptoms on a person's life and daily functional skills and abilities.

The person's GAF score is determined by interviewing the person and reviewing the person's medical records.

Acceptance and Action Questionnaire-II (AAQ-II, Bond, Hayes, Baer, Carpenter, Guenole, Orcutt, Waltz, & Zettle, 2011) revised the primary form of AAQ from 16 items down to 7 items, measuring the construct of experiential avoidance and psychological flexibility. The questionnaire assesses experiential avoidance, such as avoiding negative inner events like negative thoughts, negative feelings, and negative emotions. Items are rated on a 1 (never true) to 7 (always true) scale, which higher results mean higher experiential avoidance. AAQ-II is reliable with a mean α coefficient of .84 (from .78 to .88), and the 3, and 12 months test-retest reliability was .81 and .79, respectively. The validity of the test has been reported with 0.92 Cronbach's alpha (Costa, Marôco, Pinto Gouveia, & Galhardo, 2014).

Procedure and Intervention

The treatment group received eight sessions of online group-based therapy. Each session lasted about 75 min, and a multi-protocol ACT was employed following the protocol given by Hayes, Strosahl, & Wilson (2012). All participants in both groups completed pre-test questionnaires a week before the intervention session started. Both groups completed post-tests after eight intervention sessions ended. The data collected were statistically analyzed on both groups by using SPSS (version 27).

After the initial acquaintance, members were briefed on the rules and principles of group-based therapy and ACT foundations were explained in the first session. In the second session, the meaning of depression and anxiety was clarified in terms of the ACT frame. Also, inefficient strategies in response to inner experiences such as controlling negative thoughts and emotions were discussed. As the final point in the second session, the therapists highlighted willingness as an alternative to control. In the third session, we discussed how experiential avoidance results in psychological rigidity while acceptance promotes flexibility. Participants were instructed to avoid and substitute acceptance of experiences and prepared for learning mindfulness. The fourth session included promoting contact with the present moment, teaching essential skills of intentional allocation of attention that allow present-moment awareness, and working on the failures of present-moment processes that interfere with worthwhile living. The fifth session of the group-based therapy revolved around the notions of fusion and diffusion as well as keeping the practice of mindfulness. We talked about how fusion with verbal content can lead to suffering and introduced nonverbal and experiential exercises to promote diffusion. In the sixth session, the focus was on introducing ten life values listed in the ACT that can be used to create a sense of life's meaning and direction. We discussed how values differ from life goals and highlighted the distinction between the act of choosing and the act of deciding. The importance of value-based living was discussed, and members tried to identify their goals that are set according to personal values. In the seventh session, acceptance, mindfulness, and acting toward life values were further practiced. Subsequently, the three aspects of self-experience, and the concept of self as the background was introduced. We addressed how to undermine attachment to the conceptualized self, promote contact with self as perspective-taking and create a distinction between the client and the client's self-story. The eighth session was the last session of group therapy, and all self-therapy techniques that had been instructed to the clients were reviewed. All the questions, concerns, and important strategies were checked with participants carefully. Both groups of participants filled out the post-treatment assessments after the end of the eight sessions.

Data Analysis

In this study, we used analysis of covariance (ANCOVA) to limit the effect of the auxiliary random variable. Pre-test scores are used as the auxiliary random variable here. We also aimed to avoid the intervening variable's effects and reduce the amount of variance error, which will increase the value of *F*. For this purpose, the part of the variance of post-test scores due to the variance of pre-test scores was deducted from the total variance of post-test scores.

RESULTS

According to demographic information, in total, 40 participants joined this study (treatment group *n*= 20, mean age= 33.40, *SD*= 4.49), (control group *n*= 20, mean age= 31.50, *SD*= 5.35). In addition, nine participants had bachelor's degrees, sixteen of them had master's degrees, and 15 of the participants had Ph.D. degrees. The mean and standard deviation of the scores of depression, anxiety, quality of life, and acceptance and action are shown in table 1.

Descriptive analyses (cf., Table 1) showed that the mean scores of depression, anxiety, acceptance, and action of the treatment group decreased and quality of life increased in post-test while the average of the same variables in the control group had no significant differences. Analysis of covariance was performed to evaluate the effectiveness of ACT on depression and anxiety by controlling the effect of the pre-test.

Table 1. Mean and *SD* of scores of dependent variables.

Variables	Stages	Treatment Group Mean (SD)	Control Group Mean (SD)
Depression	Pre-test	40.75 (10.87)	35.40 (12.27)
	Post-test	25.00 (9.13)	32.60 (9.32)
Anxiety	Pre-test	38.90 (12.20)	37.65 (8.97)
	Post-test	20.00 (0.08)	36.60 (9.01)
Quality of life	Pre-test	16.80 (4.99)	17.80 (5.28)
	Post-test	23.15 (4.34)	19.15 (4.96)
Acceptance and act	Pre-test	36.45 (7.26)	39.05 (6.60)
	Post-test	21.65 (8.01)	36.70 (6.45)

Before using ANCOVA, the assumptions were checked and reported as follows. One of the assumptions of ANCOVA is the normality of the distribution of scores, which was measured by the Kolmogorov-Smirnov test. The results of this test show that the *z*-statistics obtained from the non-parametric Kolmogorov-Smirnov test of variables of anxiety (z= 12.1, p >.05), depression (z= 79., p >.05) quality of life (z= 0.72, p >.05) and acceptance and action (z = 0.69, p > 0.05) are not significant at the level of 0.05, so the null hypothesis that the data follow the normal distribution is confirmed. In addition, homogeneity test results of anxiety regression coefficients (p <.05, F= 2.09), depression (p <.05, F= 0.41), quality of life (p <.05, F= 1.47) acceptance and act (p <.05, F= 2.18) are not significant for group interaction and pre-test at the level of less than 0.05, so the data supported the hypothesis of homogeneity of regression slopes and this default is met.

Results of Levin test revealed variance homogeneity in variables of anxiety (p <.05, F= 1.67), depression (p <.05, F= 2.78), and quality of life (p <.05, 33/F= 3) the significance level obtained is greater than .05. Therefore, the assumption of homogeneity of variance is observed in all three variables. This default is not followed in the acceptance and action variable (p <.05, F= 5.86). Because all three assumptions of covariance analysis were confirmed and ANCOVA is used in the following.

Results of the ANCOVA for post-test scores show that the effectiveness of ACT on depression (F=39.54, p <.05, ηp^2= 0.52), anxiety (F= 155.07, p <0.05, ηp^2= 0.81), quality of life (F= 27.35, p <.05, ηp^2= 0.42), acceptance and act (F= 44.96, p <.05, ηp^2= 0.55) of health workers is significant in the treatment group (see Table 2).

Table 2. Covariance analysis post-test scores in quality of life variable.

Variables	Stages	*df*	*TSS*	*MS*	Statistical Power	*F*	Effect size	*p*
Depression	Pre-test	1	2147.05	2147.05	1	73.16	0.66	.001
	Group	1	1160.21	1160.21	1	39.54	0.52	.001
Anxiety	Pre-test	1	2780.74	2780.74	1	148.89	0.80	.001
	Group	1	2896.12	2896.12	1	155.07	0.81	.001
Quality of life	Pre-test	1	526.10	526.10	1	65.10	0.64	.001
	Group	1	221.01	221.01	0.99	27.35	0.42	.001
Acceptance and act	Pre-test	1	535.60	535.60	0.95	13.41	0.26	.01
	Group	1	1794.83	1794.83	1	44.96	0.55	.001

Discussion

A multitude of studies has demonstrated high comorbidity between mood and anxiety disorders. Therefore, identifying common pathological processes, and developing uniform protocols based on these underlying processes may be more effective than treating comorbid disorders separately. The primary purpose of the present study was to examine the effectiveness of group-based online ACT in a sample of healthcare professionals presenting with a mixture of mood and anxiety disorders during the COVID-19 epidemic. Participants were a relatively heterogeneous population in terms of gender, level of education, place of birth, salary and occupation. After the pretest effect was controlled, the authors went on to examine the impact of ACT on participants' anxiety, depression, and quality of life in the post-test phase. Findings indicated that after group-based ACT therapy, the scores of depression and anxiety in the treatment group compared to the control group significantly decreased, and quality of life increased consequently. These results are consistent with similar studies examining the benefits of ACT improving depression and anxiety, thus, suggest that ACT may reduce symptoms of anxiety and depression.

For example, one study was performed on end-stage cancer patients using two traditional CBT and ACT. Patients diagnosed with cancer significantly improved in depression and anxiety symptoms after 12 sessions of ACT compared to conventional cognitive-behavioral therapy (Branstetter, Wilson, Hildebrandt, & Mutch, 2004). Another study in a similar vein showed that ACT could be an effective and useful treatment approach to improve depression and anxiety among Saudi Muslim women. Their research showed that ACT reduced symptoms of depression and anxiety significantly and created

positive changes in the participants' attitudes, behavior, and self-confidence (Bahattab & AlHadi, 2021). The other study's focus was to investigate the brief effect of ACT in the same context. The results showed significant improvements in favor of the ACT group over the control group for symptoms of depression, frequency of depressive thoughts, anxiety combined with depression, and social dysfunction signs of psychopathology (Kyllönen, Muotka, Puolakanaho, Astikainen, Keinonen, & Lappalainen, 2018). A recent study held ACT workshops for college students and measured their impact on psychological flexibility, stress, anxiety, depression, well-being, and school interaction. Compared to the control group, the intervention group students scored higher in the post-program intervention in all the psychological flexibility measures investigated in this study (Grégoire *et alia*, 2018).

Another study by Ataie Moghanloo, Ataie Moghanloo, and Moazezi (2015) revealed that ACT effectively reduced depression and feelings of guilt and increased the psychological well-being of diabetic children. In addition, different research showed participants with subclinical depressive symptoms who received the four-session ACT had a more significant reduction in depression scores and improved psychological flexibility than the control group. A 6-month follow-up also approved the therapeutic effect's stability on the same group (Kohtala, Lappalainen, Savonen, Timo, & Tolvanen, 2013). Another study aimed to evaluate the effectiveness of ACT in reducing social anxiety symptoms among young people. The results showed that 12 sessions of ACT could significantly decrease social anxiety symptoms among the treatment group participants (Yadegari, Hashemiyan, & Abolmaali, 2014). Further study revealed that ACT could significantly decrease the severity of depression and increase the overall sleep quality in patients with diabetic neuropathy (Davoudi, Taheri, Foroughi, Ahmadi, & Heshmati, 2020). In addition, another study shows that the beneficial effects of an ACT workshop on staff at a psychiatric hospital are associated with improvements in specific treatment skills, for example, helping individuals follow valuable personal behavior patterns (Gaupp, Walter, Bader, Benoy, & Lang, 2020). Another study compared the efficacy of internet-delivered ACT and CBT interventions on stress management of social and healthcare workers. This research indicated the effectiveness of ACT for stress management (Barrett & Stewart, 2020).

To explain these findings, it may be argued that the model of psychological inflexibility provides a theoretical basis for psychopathology and assumes that long-term suffering is the result of the interaction between six central processes, i.e., cognitive fusion, experiential avoidance, the dominance of the future, and past, attachment to the story of one's self, lack of clarity or contact with values and lack of action (Hayes *et alia*, 2006). Psychological disturbances continue through problematic reactions to inner experiences (thoughts, feelings, desires, images, body senses, etc.). These negative reactions to emotions cause the inner experiences to be experienced as unacceptable, unbearable, and threatening, and a strong desire to escape or avoid them (Hayes *et alia*, 1996). From the Act perspective, people use coping strategies such as experimental avoidance to reduce distress, while these methods, in the long run, intensify anxiety and prevent from taking valuable actions (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996).

Relational frame theorists have argued that non-humans can easily prevent distress by avoiding situations that have occurred in the past, but humans have the unique ability to create communication networks, therefore, they can link almost every potential experience to distress. ACT researchers assume that individuals may seek to reduce pain associated with such mental events through avoidance, but avoidance

ultimately exacerbates suffering and functions as another cue for distressing mental events. In addition, people give credit to the content of mental events, and instead of acting on long-term goals, they may act in a way that is consistent with the content of their mental events (Hayes *et alia*, 2001). Thereby, people lose contact with the present moment due to attachment to conceptualized past and future, and failure to contact the transcendent sense of self leads to the domination of behavioral patterns based on the conceptualized sense of self. All of these processes play a role in creating patterns of behavior characterized by inaction, impulsivity, and avoidance in certain domains, and together create the psychological inflexibility that, in the ACT view, is the core of human suffering (Hayes *et alia*, 2012).

ACT intervention typically moves consistent mechanisms of action. ACT uses mindfulness skills, extensive range of experimental exercises, and behavioral interventions to help participants behave in ways consistent with personal values while developing psychological flexibility. Participants recognize ways in which their attempts to suppress and control emotional experiences pose problems. Developing a compassionate and nonjudgmental relationship with unpleasant emotions, make room for values-based actions that support well-being (Pearson, 2006).

In other words, it can be argued that in ACT, behavioral commitment exercises, defusion, and acceptance techniques, and detailed discussions about the values and goals of the individual as well as the need to clarify values lead to stress reduction. In this context, the purpose of emphasizing people's desire for inner experiences is to help people experience their disturbing thoughts as just a thought and do the crucial things in their lives in line with their values. In fact, in this treatment process, participants are taught to reinforce observing self instead of conceptualized self, accept internal events instead of controlling them, articulate their values, and pay them attention. In this study, participants learned to experience their thoughts and feelings instead of trying to stop them. They also learned to connect with their defined goals and value system consistently. They consequently tried to adjust their lives based on them, which helped reduce their stress, anxiety, and depression, which is supported by the model of Hayes *et alia* (2012).

Regarding depression, by means of a change in lifestyle choices and following personal values or important domains of life, the individual receiving therapy will get closer to their goals. Thus, the subject can have a higher performance and may feel more satisfied. These, in turn, reduce symptoms of depression (Davoudi *et alia*, 2020). Regarding anxiety, subjects can recognize their self-value and acknowledge their anxiety as a natural feeling through this treatment. Therefore, they can experience positive changes. The subject's ability to commit to their positive self-value can reduce anxiety and shift their focus from anxiety to positive thinking. After realizing the condition, the subject gains self-value. The result is a reduction in the signs and symptoms of anxiety and positive changes in a subject's behavior (Sianturi *et alia*, 2018).

To account for how the online ACT in the present study affected the quality of life, it can be argued that this treatment does not impose any particular value or lifestyle on the subject, unlike many other treatments, and subjects can make decisions based on their value system. Another essential process in the ACT is committed actions. Therefore, the researchers encouraged the participants to clarify values, set goals and anticipate obstacles in these hectic times. The committed actions could not only increase the participants' quality of life but also gave them relief from the cycle of negative thoughts and feelings (Behrouz, Bavali, Heidarizadeh, & Farhadi, 2016). Thus, based on the ACT model and the degree of efficacy supported in the current study, it can be

concluded that ACT can effectively reduce anxiety and depression of participants and ameliorate their quality of life.

According to the findings of this research, we suggest that the components of psychological inflexibility can be considered crucial factors in the psychopathology of emotional disorders. Therefore, our research supports the dimensional approach to diagnosis and treatment. Herewith, based on the theoretical framework and the results of this study, and ongoing global circumstances, we would encourage more research on this topic and the application of the psychotherapeutic approach among health care workers in clinical settings.

REFERENCES

Al Maghaireh DF, Abdullah KL, Chong MC, Chua YP, & Al Kawafha MM (2017). Stress, Anxiety, Depression and Sleep Disturbance among Jordanian Mothers and Fathers of Infants Admitted to Neonatal Intensive Care Unit: A Preliminary Study. *Journal of Pediatric Nursing*, *36*, 132-140. Doi: 10.1016/j.pedn.2017.06.007

Al-Quisy LM (2011). The relation of depression and anxiety in academic achievement among a group of university students. *International Journal of Psychology and Counselling, 3*, 96-100.

Arafa A, Mohammed Z, Mahmoud O, Elshazley M, & Ewis A (2021). Depressed, anxious, and stressed: What have healthcare workers on the frontlines in Egypt and Saudi Arabia experienced during the COVID-19 pandemic? *Journal of Affective Disorders*, *278*, 365-371. Doi: 10.1016/j.jad.2020.09.080

Ataie Moghanloo V, Ataie Moghanloo R, & Moazezi M (2015). Effectiveness of Acceptance and Commitment Therapy for Depression, Psychological Well-Being and Feeling of Guilt in 7 - 15 Years Old Diabetic Children. *Iranian Journal of Pediatrics*, *25*. Doi: 10.5812/ijp.2436

Bahattab M & AlHadi AN (2021). Acceptance and commitment group therapy among Saudi Muslim females with mental health disorders. *Journal of Contextual Behavioral Science*, *19*, 86-91. Doi: 10.1016/j.jcbs.2021.01.005

Bai Z, Luo S, Zhang, L, Wu S, & Chi I (2020). Acceptance and Commitment Therapy (ACT) to reduce depression: A systematic review and meta-analysis. *Journal of Affective Disorders*, *260*, 728-737. Doi: 10.1016/j.jad.2019.09.040

Barrett K & Stewart I (2020). A preliminary comparison of the efficacy of online Acceptance and Commitment Therapy (ACT) and Cognitive Behavioural Therapy (CBT) stress management interventions for social and healthcare workers. *Health & Social Care in the Community*, *29*, 113-126. Doi: 10.1111/hsc.13074

Beck AT, Epstein N, Brown G, & Steer RA (1988). An inventory for measuring clinical anxiety: Psychometric properties. *Journal of Consulting and Clinical Psychology*, *56*, 893-897. Doi: 10.1037/0022-006x.56.6.893

Beck A, Steer R, & Brown G (1996). *Beck Depression Inventory*. 2nd Ed. San Antonio, TX: Psychological Corporation.

Behrouz B, Bavali F, Heidarizadeh N, & Farhadi M (2016). The Effectiveness of Acceptance and Commitment Therapy on Psychological Symptoms, Coping Styles, and Quality of Life in Patients with Type-2 Diabetes. *Journal of Health*, *7*, 236-253.

Bond FW, Hayes SC, Baer RA, Carpenter KM, Guenole N, Orcutt HK, Waltz T, & Zettle RD (2011). Preliminary Psychometric Properties of the Acceptance and Action Questionnaire–II: A Revised Measure of Psychological Inflexibility and Experiential Avoidance. *Behavior Therapy*, *42*, 676–688. Doi: 10.1016/j.beth.2011.03.007

Branstetter A, Wilson K, Hildebrandt M, & Mutch D (2004). *Improving psychological adjustment among cancer patients: ACT and CBT*. Meeting of the Association for Advancement of Behavior Therapy, New Orleans.

Costa J, Marôco J, Pinto Gouveia J, & Galhardo, A (2014). Validation of the Psychometric Properties of Acceptance and Action Questionnaire-II in Clinical and Nonclinical Groups of Portuguese Population. *International Journal of Psychology and Psychological Therapy*, *14*, 353-364.

Davoudi M, Taheri AA, Foroughi AA, Ahmadi, SM, & Heshmati K (2020). Effectiveness of acceptance and commitment therapy (ACT) on depression and sleep quality in painful diabetic neuropathy: A randomized clinical trial. *Journal of Diabetes & Metabolic Disorders*, *19*, 1081-1088. Doi: 10.1007/s40200-020-00609-x

Dabson KS & Mohammadkhani P (2007). Psychometric Characteristics of Beck Depression Inventory-II in Patients with Major Depression Disorder, *Journal of Rehabilitation*, *8*, 82-88.

Elhadi M, Mashreghi A, Elgzairi M, Alhashimi A, Bouhuwaish A, Biala M, Abuelmeda S, Khel S, Khaled A, Alsoufi A, Elmabrouk A, Alshiteewi FB, Alhadi B, Alhaddad S, Gaffaz R, Elmabrouk O, Ben Hamed T, Alameen

H, Zaid A, Elhadi A, & Albakoush A (2020). Psychological status of healthcare workers during the civil war and COVID-19 pandemic: A cross-sectional study. *Journal of Psychosomatic Research*, *137*, 110221. Doi: 10.1016/j.jpsychores.2020.110221

Endicott J, Spitzer RL, Fleiss JL, & Cohen J (1976). The Global Assessment Scale. *Archives of General Psychiatry*, *33*, 766-771. Doi: 10.1001/archpsyc.1976.01770060086012

Fathi-Ashtiani A (2012). *Psychological tests, personality and mental health*. Tehran: Beesat.

Ferrans CE & Powers MJ (1992). Psychometric assessment of the quality of life index. *Research in Nursing & Health*, *15*, 29-38. Doi: 10.1002/nur.4770150106

Frisch MB, Clark MP, Rouse SV, Rudd MD, Paweleck JK, Greenstone A, & Kopplin DA (2005). Predictive and Treatment Validity of Life Satisfaction and the Quality of Life Inventory. *Assessment*, *12*, 66–78. Doi: 10.1177/1073191104268006

Frisch MB, Cornell J, Villanueva M, & Retzlaff PJ (1992). Clinical validation of the Quality of Life Inventory. A measure of life satisfaction for use in treatment planning and outcome assessment. *Psychological Assessment*, *4*, 92-101. Doi: 10.1037/1040-3590.4.1.92

Gaupp R, Walter M, Bader K, Benoy C, & Lang UE (2020). A Two-Day Acceptance and Commitment Therapy (ACT) Workshop Increases Presence and Work Functioning in Healthcare Workers. *Frontiers in Psychiatry, 11*, 861. Doi: 10.3389/fpsyt.2020.00861

Grégoire S, Lachance L, Bouffard T, & Dionne F (2018). The Use of Acceptance and Commitment Therapy to Promote Mental Health and School Engagement in University Students: A Multisite Randomized Controlled Trial. *Behavior Therapy*, *49*, 360-372. Doi: 10.1016/j.beth.2017.10.003

Grootenboer EMV, Giltay EJ, van der Lem R, van Veen T, van der Wee NJA, & Zitman FG (2011). Reliability and validity of the Global Assessment of Functioning Scale in clinical outpatients with depressive disorders. *Journal of Evaluation in Clinical Practice*, *18*, 502-507. Doi: 10.1111/j.1365-2753.2010.01614.x

Hassanian-Moghaddam H, Zamani N, & Kolahi AA (2020). COVID-19 pandemic, healthcare providers' contamination and death: An international view. *Critical Care, 24*, 208. Doi: 10.1186/s13054-020-02938-y

Hayes SC, Barnes-Holmes D, & Roche B (2001). *Relational Frame Theory: A Post Skinnerian account of human language and cognition*. New York: Plenum Press.

Hayes SC, Luoma JB, Bond FW, Masuda A, & Lillis J (2006). Acceptance and Commitment Therapy: Model, processes and outcomes. *Behaviour Research and Therapy*, *44*, 1-25. Doi: 10.1016/j.brat.2005.06.006

Hayes SC, Strosahl KD, Bunting K, Twohig M, & Wilson KG (2005). What Is Acceptance and Commitment Therapy? In SC Hayes & KD Strosahl (Eds.), *A practical guide to acceptance and commitment therapy* (pp. 3-29). New York: Springer.

Hayes SC, Strosahl KD, & Wilson KG (2012). *Acceptance and commitment therapy: The process and practice of mindful change* 2nd Ed. New York: Guilford Press.

Hayes SC, Wilson KG, Gifford EV, Follette VM, & Strosahl K (1996). Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology*, *64*, 1152-1168. Doi: 10.1037/0022006x.64.6.1152

Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, Zhang L, Fan G, Xu J, Gu X, Cheng Z, Yu T, Xia J, Wei Y, Wu W, Xie X, Yin W, Li H, Liu M, Xiao Y, Gao H, Guo L, Xie J, Wang G, Jiang R, Gao Zh, Jin Q, Wang J, & Cao, B (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The Lancet*, *395*, 102-123, 497-506. Doi: 10.1016/s0140-6736(20)30183-5

Kashdan TB, & Rottenberg J (2010). Psychological flexibility as a fundamental aspect of health. *Clinical Psychology Review*, *30*, 865-878. Doi: 10.1016/j.cpr.2010.03.001

Kato T (2016). Psychological inflexibility and depressive symptoms among Asian English speakers: A study on Indian, Philippine, and Singaporean samples. *Psychiatry Research*, *238*, 1-7. Doi: 10.1016/j.psychres.2016.02.007

Kaviani H & Mousavi AS (2008). Psychometric properties of the Persian version of Beck Anxiety Inventory (BAI). *Tehran University Medical Journal*, *65*, 136-140.

Kazemi M & Javid M (2010). The relationship between mental health and women's tendency to suicide in sardasht. *Procedia -Social and Behavioral Sciences*, *5*, 1381-1386. Doi: 10.1016/j.sbspro.2010.07.292

Kessler RC, Chiu WT, Demler O, Merikangas K, & Walters EE (2005). Prevalence, Severity, and Comorbidity of 12-Month DSM-IV Disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, *62*, 617. Doi: 10.1001/archpsyc.62.6.617

Khakbaz H, Karami H, Shafi'e-Abadi A, Malmir M, & Farhadi MH (2014). The Relationship between Depression,

Anxiety, Stress and Aggression in Patients with Drug Dependence. *Journal of Rehabilitation*. *14*, 15-20.

Kohtala A, Lappalainen R, Savonen L, Timo E, & Tolvanen A (2013). A Four-Session Acceptance and Commitment Therapy Based Intervention for Depressive Symptoms Delivered by Masters Degree Level Psychology Students: A Preliminary Study. *Behavioural and Cognitive Psychotherapy*, *43*, 360-373. Doi: 10.1017/s1352465813000969

Kupferberg A, Bicks L, & Hasler G (2016). Social functioning in major depressive disorder. *Neuroscience & Biobehavioral Reviews*, *69*, 313-332. Doi: 10.1016/j.neubiorev.2016.07.002

Kyllönen HM, Muotka J, Puolakanaho A, Astikainen P, Keinonen K, & Lappalainen R (2018). A brief Acceptance and Commitment Therapy intervention for depression: A randomized controlled trial with 3-year follow-up for the intervention group. *Journal of Contextual Behavioral Science*, *10*, 55–63. Doi: 10.1016/j.jcbs.2018.08.009

Levin ME, Pistorello J, Seeley JR, & Hayes SC (2013). Feasibility of a Prototype Web-Based Acceptance and Commitment Therapy Prevention Program for College Students. *Journal of American College Health*, *62*, 20-30. Doi: 10.1080/07448481.2013.843533

Mak IWC, Chu CM, Pan PC, Yiu MGC, & Chan VL (2009). Long-term psychiatric morbidities among SARS survivors. *General Hospital Psychiatry*, *31*, 318-326. Doi: 10.1016/j.genhosppsych.2009.03.001

Masuda A, Mandavia A, & Tully EC (2014). The role of psychological inflexibility and mindfulness in somatization, depression, and anxiety among Asian Americans in the United States. *Asian American Journal of Psychology*, *5*, 230-236. Doi: 10.1037/a0034437

Otared N, Narimani M, Sadeghi G, Mahmood Aliloo M, & Atadokht A (2019a). Comparison of Components of Psychological Inflexibility in Students with Major Depressive Disorder, Generalized Anxiety Disorder, Social Anxiety Disorder and Normal Students of Tabriz University of Medical Sciences in the 2017-2018. *Journal of Rafsanjan University of Medical Science*, *18*, 121-132.

Otared N, Narimani M, Sadeghi G, Mahmood Alilou M, Atadokht A (2019b). Explanation of generalized anxiety disorder, social anxiety disorder and major depression disorder based on psychopathological model of acceptance and commitment therapy. *Journal of Rafsanjan University of Medical Science*, *26*, 47-58.

Pappa S, Ntella V, Giannakas T, Giannakoulis VG, Papoutsi E, & Katsaounou P (2020). Corrigendum to "Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis". *Brain, Behavior, and Immunity*, *92*, 247. Doi: 10.1016/j.bbi.2020.11.023

Pearson BL (2006). Acceptance & Commitment Therapy for Anxiety Disorders: A Practitioner's Treatment Guide to Using Mindfulness, Acceptance, and Values-Based Behavior Change Strategies. *Journal of Contemporary Psychotherapy*, *36*, 191-192. Doi: 10.1007/s10879-006-9024-y.

Pouralizadeh M, Bostani Z, Maroufizadeh S, Ghanbari A, Khoshbakht M, Alavi SA, & Ashrafi S (2020). Anxiety and depression and the related factors in nurses of Guilan University of Medical Sciences hospitals during COVID-19: A web-based cross-sectional study. *International Journal of Africa Nursing Sciences*, *13*, 100233. Doi: 10.1016/j.ijans.2020.100233

Rutten S, Vriend C, van der Werf YD, Berendse HW, Weintraub D, & van den Heuvel OA (2017). The bidirectional longitudinal relationship between insomnia, depression and anxiety in patients with early-stage, medication-naïve Parkinson's disease. *Parkinsonism & Related Disorders*, *39*, 31-36. Doi: 10.1016/j.parkreldis.2017.01.015

Sahebi A, Nejati-Zarnaqi B, Moayedi S, Yousefi K, Torres M, & Golitaleb M (2021). The prevalence of anxiety and depression among healthcare workers during the COVID-19 pandemic: An umbrella review of meta-analyses. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, *107*, 110247. Doi: 10.1016/j.pnpbp.2021.110247

Santos AM, Benute GRG, Santos NO, Nomura RMY, de Lucia MCS, & Francisco RPV (2017). Presence of eating disorders and its relationship to anxiety and depression in pregnant women, *Midwifery*, *51*, 12-15. Doi: 10.1016/j.midw.2017.05.005

Sewart AR, Niles AN, Burklund LJ, Saxbe DE, Lieberman MD, & Craske MG (2020). Corrigendum to "Examining Positive and Negative Affect as Outcomes and Moderators of Cognitive Behavioral Therapy and Acceptance and Commitment Therapy for Social Anxiety Disorder". *Behavior Therapy*, *51*, 203. Doi: 10.1016/j.beth.2019.12.001

Sianturi R, Anna Keliat B, & Yulia Wardani I (2018). The effectiveness of acceptance and commitment therapy on anxiety in clients with stroke. *Enfermería Clínica*, *28*, 94-97. Doi: 10.1016/s1130-8621(18)30045-7

Tran BX, Ha GH, Nguyen LH, Vu GT, Hoang MT, Le HT, Latkin CA, Ho CSH, & Ho RCM (2020). Studies of Novel Coronavirus Disease 19 (COVID-19) Pandemic: A Global Analysis of Literature. *International Journal of*

Environmental Research and Public Health, *17*, 4095. Doi: 10.3390/ijerph17114095

Twohig MP & Levin ME (2017). Acceptance and Commitment Therapy as a Treatment for Anxiety and Depression. *Psychiatric Clinics of North America*, *40*, 751-770. Doi: 10.1016/j.psc.2017.08.009

van Aubel E, Bakker JM, Batink T, Michielse S, Goossens L, Lange I, Schruers K, Lieverse R, Marcelis M, van Amelsvoort T, van Os J, Wichers M, Vaessen T, Reininghaus U, & Myin-Germeys I (2020). Blended care in the treatment of subthreshold symptoms of depression and psychosis in emerging adults: A randomised controlled trial of Acceptance and Commitment Therapy in Daily-Life (ACT-DL). *Behaviour Research and Therapy*, *128*, 103592. Doi: 10.1016/j.brat.2020.103592

Vatnaland T, Vatnaland J, Friis S, & Opjordsmoen S (2007). Are GAF scores reliable in routine clinical use? *Acta Psychiatrica Scandinavica*, *115*, 326–330. Doi: 10.1111/j.1600-0447.2006.00925.x

Weiner L, Berna F, Nourry N, Severac F, Vidailhet P, & Mengin AC (2020). Efficacy of an online cognitive behavioral therapy program developed for healthcare workers during the COVID-19 pandemic: The Reduction of Stress (REST) study protocol for a randomized controlled trial. *Trials, 21*, 870. Doi: 10.1186/s13063-020-04772-7

WHO (2021). Coronavirus disease (COVID-19) Weekly Epidemiological Update and Weekly Operational Update. Retrieved from https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports

Woodruff SC, Glass CR, Arnkoff DB, Crowley KJ, Hindman RK, & Hirschhorn EW (2013). Comparing Self-Compassion, Mindfulness, and Psychological Inflexibility as Predictors of Psychological Health. *Mindfulness*, *5*, 410-421. Doi: 10.1007/s12671-013-0195-9

World Medical Association Declaration of Helsinki (2013). *JAMA*, *310*, 2191. Doi: 10.1001/jama.2013.281053

Wu P, Fang Y, Guan Z, Fan B, Kong J, Yao Z, Liu X, Fuller C J, Susser E, Lu J, & Hoven CW (2009). The Psychological Impact of the SARS Epidemic on Hospital Employees in China: Exposure, Risk Perception, and Altruistic Acceptance of Risk. *The Canadian Journal of Psychiatry*, *54*, 302-311. Doi: 10.1177/070674370905400504

Xiao J, Fang M, Chen Q, & He B (2020). SARS, MERS and COVID-19 among healthcare workers: A narrative review. *Journal of Infection and Public Health*, *13*, 843–848. Doi: 10.1016/j.jiph.2020.05.019

Yadegari L, Hashemiyan K, & Abolmaali K (2014). Effect of Acceptance and Commitment Therapy on Young People with Social Anxiety. *International Journal of Scientific Research in Knowledge*, *2*, 395-403. Doi: 10.12983/ijsrk-2014-p0395-0403

Zhang G, Zhang J, Wang B, Zhu X, Wang Q, & Qiu S (2020). Analysis of clinical characteristics and laboratory findings of 95 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a retrospective analysis. *Journal of Respiratory Research*, *21*, 1. Doi: 10.1186/s12931-020-01338-8

Received, May 9, 2021
Final Acceptance, August 17, 2021