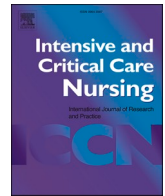




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Research Article

The examination of stress symptoms and posttraumatic growth in the patients diagnosed with Covid-19

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ABSTRACT

Objective: COVID-19 infection can profoundly affect patients' lives. Coping with difficult life crises can also lead to increased stress or positive psychological change called post-traumatic growth. This research was conducted to examine the symptoms of stress and post-traumatic growth symptoms in the patients diagnosed with COVID-19 (Coronavirus).

Method: The present study, which is in a descriptive design, was conducted with 175 patients who were discharged after being treated in the intensive care units with the diagnosis of COVID-19. The personal information form, the Posttraumatic Diagnostic Scale (PTDS), and the Posttraumatic Growth Inventory (PTGI) were used to collect data.

Results: The mean score for Posttraumatic Stress Symptoms of the participants was 19.18 ± 9.53 , and the mean score for Posttraumatic Growth Inventory was 0.86 ± 0.47 . In addition, a significant positive correlation was found between PTDS and PTGI mean scores ($p < 0.001$). As the degree of being affected by covid 19 increases, posttraumatic growth and traumatic stress symptom levels increase ($p < 0.05$). The posttraumatic growth levels increase as the time elapsed after the treatment of COVID-19 increases ($p < 0.001$).

Conclusion: It was determined that after the traumatic experience (COVID-19), the participants had moderate traumatic stress symptoms, and they overcame this situation by experiencing growth. It is recommended to take preventive measures against the symptoms of stress and support the patients in terms of overcoming this process by getting stronger.

Implications for clinical practice

- Cognitive behavioural therapy interventions should be applied to the traumatic experiences of the patients after the intensive care treatment process.
- Nurses should recognise the traumatic symptoms of the patient in the early period during the intensive care treatment process, take the necessary precautions and reduce the patient's stress level by giving the patient the ability to cope with stress.
- It is recommended that nurses plan appropriate interventions for the patient, use the right psychotherapy techniques so that patients can more easily overcome the traumatic effects of the intensive care process and grow out of this negative experience.

The World Health Organization declared the COVID-19 (Coronavirus) epidemic as a public health emergency of international importance

in 2020 (Media Briefing, 2020). In people with a positive Coronavirus test, it can progress from asymptomatic or mild pneumonia to acute respiratory failure and death, which can be severe, and fatal (Wu &

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McGoogan, 2020). Severe symptoms in some cases necessitate the intensive care treatment process for the patients. Intensive care is appropriate for patients requiring or likely to require advanced respiratory support, patients requiring support of two or more organ systems, and patients with chronic impairment of one or more organ systems who also require support for an acute reversible failure of another organ (Smith & Nielsen, 1999; Wunsch et al., 2004). Especially, the progressively worsening respiratory failure outlook of patients in the risk group has made it mandatory for individuals to receive treatment based on mechanical ventilators in the intensive care unit (ICU) (Bahar & Buldak, 2020).

While the presence of any illness can cause stress in individuals, the experience of stress can become more intense in the presence of a serious illness requiring admission to the intensive care unit (McKinney & Melby, 2002). In addition, prolonged hospitalisation and sedation in the ICU negatively affect the consciousness of patients and cause stressful experiences (Samuelson et al., 2007). After the traumatic experience, the body goes into an alarm state and defensive reactions emerge. In this case, physiological preparations for the fight-or-flight response begin in the body (Sapolsky, 2004). In addition to physical symptoms, emotional symptoms such as anger, anxiety, sadness, embarrassment, and difficulty regulating emotions can be seen (Madde Bağmıhıgı Tedavi, 2014). Various risk factors associated with admissions to ICU lead to higher rates of post-traumatic stress disorder (PTSD) than in other medical settings. Besides being critically unwell and fearing they may die, patients are exposed to the ICU environment with constant noise, light, frequent medical checks, pain, and sleep disruption (Murray et al., 2020). Staying in the ICU was stated as a traumatic life experience due to the loss of body functions, deterioration of comfort, environmental stress, and feeling of loneliness (Fredriksen & Ringsberg, 2007; Karlsson, Bergbom & Forsberg, 2012; Samuelson et al., 2007). As a result of this traumatic life experience, posttraumatic stress disorder (PTSD) symptoms are common 12 months after discharge, and they may affect 1 out of every 5 adults staying in the ICU (Righy et al., 2019). Given both the prevalence of PTSD and its potential negative impact on quality of life, ICU survivors should be screened for PTSD symptoms, and appropriate treatments should be provided to them (Righy et al., 2019). It is important to investigate those who have had this disease severe enough to require treatment in the ICU due to the COVID-19 pandemic, which has become a global health crisis, in terms of traumatic stress symptoms.

On the other hand, there may be significant differences in the reactions of individuals to traumatic life experiences. While the traumatic event causes serious mental problems such as anxiety, depression, and posttraumatic stress disorder in some (Shakespeare-Finch et al., 2003; Tedeschi and Calhoun, 1996) it may result in posttraumatic growth (PTG) in others. PTG explains the positive psychological changes as a result of a struggle with a major life crisis or traumatic event (Calhoun and Tedeschi, 2014). However, facing adversity does not always shake beliefs or make people struggle, but can rather allow them to simply bounce back, known as resilience (Yao & Hsieh, 2019). Resilience explains the likelihood that an individual can overcome highly stressful events, remaining psychologically healthy despite undergoing hardships (Rutter, 2007). According to Litz, resilience as defined as bouncing back from an understandably human biological, social, psychological and spiritual response to extreme events (Litz, 2014).

Existential psychologists have recognised that trauma and suffering are growth opportunities, and they have defined trauma as the time when meaning is created and courage can be found. Based on the ideas of thinkers such as Kierkegaard and Nietzsche (what does not kill me makes me stronger) (Nietzsche, 2005), it is emphasized that traumatic experience can be a kind of practice in which individuals can question the meaning of life (Tedeschi and Calhoun, 2004; Tedeschi et al., 1998). Post-traumatic growth is expressed as positive psychological change after difficult life experiences (Tedeschi & Calhoun, 2004). These positive changes are generally considered in three dimensions. The first of these is the development of interpersonal relations, the second is the

change of people's perspectives on themselves, and the third is the change in their perspectives on life and life philosophies. For example, people appreciate the value of starting each day, and they change their priorities by realising that life has an end (Joseph, 2009). Calhoun and Tedeschi (1998) and Tedeschi and ve Calhoun (1995) stated that growth and stress can coexist and that growth is not a process that comes after the end of stress (Calhoun and Tedeschi, 1998; Tedeschi et al., 1998). Posttraumatic growth does not mean that the experience of trauma is desirable or necessary to make significant changes in life. It is not equated with a sense of happiness, either. It is, however, an opportunity for a more meaningful and valuable life (Ogińska-Bulik and Kobylarczyk, 2015).

Although trauma studies mostly focus on negative symptoms arising from trauma, there are research findings indicating that traumatic events do not only cause negative reactions; on the contrary, positive changes can be experienced in individuals exposed to trauma (Cordova et al., 2001; Park & Helgeson 2006; Tanrıverdi et al., 2012). It is noteworthy that the contents of scientific studies conducted during the pandemic process generally have focused on the negative effects of the pandemic (Chamberlain et al., 2021; Janiri et al., 2021; Rossi et al. 2020; Tarsitani et al., 2021; Wang et al., 2020). In the present study, it was aimed to determine whether the experience of posttraumatic growth, which expresses a positive change, as well as the traumatic stress effects experienced by the patients treated in the ICU due to COVID-19 during the post-discharge follow-up period have an effect, and to investigate the relationship between them. Health professionals have important responsibilities in recognised traumatised individuals, provide the support they need, and make them come out of this process by getting stronger (İnci & Boztepe, 2013). As a result, the data of this study will guide the caregivers to determine the traumatic stress levels of the patients who are in intensive care due to COVID-19 and to help the patients come out of the trauma experienced by getting stronger. In addition, the current research provides a new perspective in terms of recognising the symptoms of stress and planning interventions for preventive and therapeutic services. This research was conducted to examine the symptoms of stress and post-traumatic growth in the patients diagnosed with COVID-19 (Coronavirus).

Methods

This research, which was carried out in a descriptive design, was conducted between the dates December 2020 and January 2021 with patients who were discharged after being treated for the diagnosis of COVID-19 in the intensive care unit of a training and research hospital operating as a pandemic hospital in Gaziantep/Turkey.

Research population and sample

The population of the study consisted of patients who were hospitalised due to COVID-19 in the intensive care unit where the research was conducted. G Power program was used to calculate the sample size. Previous studies were reviewed (Çınarbaşı & Doğan, 2019; Kardaş & Tanhan, 2018), and the expected confidence intervals of the "Post Traumatic Growth Inventory" were determined as 81 patients, while the confidence interval was $\alpha = 0.05$, the power of the test ($1-\beta$) was 0.95, the effect size $d = 0.4060995$. Accordingly, the sample of the study consisted of 175 (74 female, 101 male) patients who met the inclusion criteria.

Inclusion Criteria: Patients who have been discharged from intensive care unit treatment for at least three months due to COVID-19, volunteered to participate in the study, being over 18 years old, and not having a cognitive disability (patients with intellectual disability or dementia that makes cooperation impossible).

Exclusion Criteria: Patients who were discharged from the ICU after inpatient treatment due to COVID-19 yet (less than three months ago), refused to participate in the study.

Data collection

The data were collected in a single step, after informing the patients about the purpose of the study by telephone and then obtaining their verbal consent. Data were collected by telephone interviews with patients who met the inclusion criteria in a pandemic hospital. First of all, the patients were informed about the study by the researchers. Afterward, questionnaire forms were applied to the patients who agreed to participate in the study. In data collection, the “Personal Information Form” was used to determine the descriptive characteristics of the patients and information about the trauma, the “Posttraumatic Diagnostic Scale” was utilised to determine the level of posttraumatic stress, and the “Posttraumatic Growth Inventory” was applied to determine posttraumatic growth. Data collection took an average of 20–25 min.

Data collection tools

The Personal Information Form: This form, prepared by the researchers, includes questions about the socio-demographic characteristics of the patients and their knowledge of the disease.

The Posttraumatic Diagnostic Scale (PTDS): Was developed by Foa et al. (1997) and its Turkish adaptation was made by Dikmen-Yildiz et al., (2017). The scale, which consists of 51 items in total, has four parts. The first part determines the “type of traumatic event” experienced by the person. In the second part, there are questions to determine the “severity of the traumatic event”. The questions to determine the severity of the traumatic event are called the “Event Severity Sub-Scale” in the Turkish validity and reliability study of the scale (Dikmen-Yildiz et al., 2017). The high number of “yes” answers of the person indicates that the severity of the event is high. In the third part of the scale, there is the “Posttraumatic Stress Symptoms Sub-Scale” which evaluates posttraumatic symptoms. This subscale is a Likert-type scale scored between 0 and 3. The range of scores that can be obtained from the subscale is 0–51. A stress symptom score of 10 or less is considered mild, between 11 and 20 considered moderate, between 21 and 35 considered moderate-severe, and above 35 considered severe stress. In addition to the total symptom score, this subscale also explains the dimensions of “reexperiencing/intrusive thoughts”, “avoidance/emotional bluntness” and “hyperarousal”. An increase in the score indicates an increase in posttraumatic stress symptoms. In the Turkish validity and reliability study of this subscale, the internal consistency coefficient was 0.89 (Dikmen-Yildiz et al., 2017). In this study, the Cronbach’s alpha reliability coefficient of the subscale was determined as 0.74.

The Posttraumatic Growth Inventory (PTGI): The inventory was developed by Tedeschi and Calhoun (1996) to determine the positive changes that occur as a result of the traumatic events experienced by individuals. The scale consists of 21 items in total. The Turkish adaptation of the inventory was made by Kılıç (2005) according to the translation of Dirik (2006). Dirik (2006), on the other hand, made a comparison with Kılıç’s translation in the study conducted with rheumatoid arthritis patients. Dirik (2006) determined 3 factors explaining 59% of the variance as a result of the factor analysis performed on the “Posttraumatic Growth Inventory”. These factors are named “Change in the Relationships with Others”, “Change in the Philosophy of Life” and “Change in the Self”. The scale is graded between 0 and 5 points. In this study, the PTGI score was evaluated based on item averages and total averages. High scores obtained from the PTGI indicate the positive changes in the person after the trauma. In the Turkish validity and reliability study of the inventory, the reliability coefficient was found to be 0.94 (Dirik, 2006). In this study, the Cronbach’s alpha reliability coefficient of the scale was determined as 0.86.

Data analysis

SPSS (Statistical Package for Social Sciences) 22.0 package program was used for coding and evaluating the data. Percentage, arithmetic

mean, standard deviation, Pearson correlation, regression analysis, and analysis of variance were used in the evaluation of the data. The $p < 0.05$ level was accepted as significant.

Ethical considerations of the research

The study has been performed by the Declaration of Helsinki. Approval was obtained from a state university of Clinical Research Ethics Committee to conduct the study (2020/372). Verbal consents were obtained from the individuals included in the study by explaining the purpose of the study and the content of the forms. It was stated that the participants were free to participate in the research and to leave at any time after participating in the research, the principle of “Respect for Autonomy” was followed, and the principle of “Confidentiality and Protection of Confidentiality” was adhered to by stating that their information would be kept confidential.

Findings

57.7% of the participants included in the study were male, 86.3% of them were married, 43.4% of them were between the ages of 41–60, 76.6% of them had nuclear families (consisting of a father, a mother and their children), 24.6% of them were working, 57.1% of them had an income level equal to their expenses, % 34.3 of them were primary school graduates, 78.3% of them were living in the city center. In addition, 4–7 months have passed since 68% of them were diagnosed with Covid19, and 94.9% did not receive psychiatric support. 33.1% of the participants received treatment for >21 days in the clinics and/or ICU. 33.1% of the individuals participating in the research stated that they were very affected by the pandemic process.

When the mean scores of the posttraumatic stress symptoms of the participants were examined, it was seen that they experienced mostly the avoidance symptoms, and the re-experiencing symptoms at least (Table 1).

When the posttraumatic growth score averages of the participants were examined, it was seen that the participants experienced growth mostly in the field of change in the self, followed by a change in the relationships with others, and change in the philosophy of life (Table 2).

When the relationship between the PTDS total score and its sub-dimensions was examined, a significant positive correlation was found between the severity of the traumatic event and the stress symptom level sub-dimensions of the traumatic event, reexperiencing, avoidance, and hyperarousal ($p < 0.001$). A significant positive correlation was found between the effect of the traumatic event sub-dimension of the PTDS and the stress symptom level sub-dimensions of the traumatic event, reexperiencing, avoidance, and hyperarousal ($p < 0.001$). When the relationship between PTDS sub-dimensions total score and PTGI was

Table 1

Mean scores of the participants’ posttraumatic diagnostic scale’s sub-dimensions (n = 175).

The Posttraumatic Diagnostic Scale	Minimum and Maximum Scores That Can Be Obtained from the Scale	Minimum and Maximum Scores Taken from the Scale	X ± SD
Severity of the Traumatic Event	0–6	0–6	2.83 ± 1.43
Impact of the Traumatic Event	0–9	0–9	5.12 ± 1.94
Total Score of the Traumatic Event’s Stress Symptom Level	0–51	0–47	19.18 ± 9.53
1. Reexperiencing	0–15	0–15	5.08 ± 3.83
2. Avoidance	0–21	0–21	8.97 ± 4.40
3. Hyperarousal	0–15	0–15	5.12 ± 3.80

Table 2
Mean item scores of the participants' posttraumatic growth inventory (PTGI) total and sub-dimensions (n = 175).

Posttraumatic Growth Inventory	Minimum and Maximum Scores That Can Be Obtained from the Scale	Minimum and Maximum Scores Taken from the Scale	X ± SD
Change in the Relationships with Others	0-5	0-5	1.98 ± 1.05
Change in the Philosophy of Life	0-5	0-5	1.57 ± 1.26
Change in the Self	0-5	0-5	2.57 ± 0.96
PTGI Total Item Score	0-5	0-5	2.14 ± 0.90
PTGI Total Score	0-105	0-105	45.10 ± 18.87

examined, a positive and significant correlation was found between all sub-dimensions of PTGI except the severity of the event and the PTGI total score (p < 0.05) (Table 3).

A statistically significant correlation was found in the regression analysis performed to determine how the posttraumatic growth of the patients in the model predicted the levels of posttraumatic stress symptoms (F = 19.541, p < 0.001). According to the model, it was determined that posttraumatic growth levels explained 10% of posttraumatic stress symptoms (R = 0.319, R² = 0.101) (Table 4).

There was a significant difference between the patients' time elapsed after being discharged from intensive care treatment due to COVID-19 increased, and the mean scores of PTGI and all sub-dimensions (p < 0.05). As the time elapsed after being discharged from intensive care treatment due to COVID-19 increased, individuals' post-traumatic growth levels increased. While there was a significant difference between the PTDS sub-dimensions, the stress symptom level of the traumatic event, and the mean score of the effect of the traumatic event (p < 0.05), there was no significant difference in the severity of the traumatic event (p > 0.05). It was observed that the stress symptom levels and traumatic effects of those who stated that they were very much affected by Covid-19 were at the highest level (Table 5).

A significant difference was found between the time elapsed after the COVID-19 treatment of the patients and the mean score of PTGI and all sub-dimensions (p < 0.001). Posttraumatic growth levels increase as the time elapsed after the treatment of COVID-19 increases. It is observed that post-traumatic growth occurs mostly at 8-11 months, 4-7 months and 3 months after discharge, respectively. There is no significant difference between the mean stress symptom level of the traumatic event, the effect of the traumatic event, and the severity of the traumatic event, which are included in the PTDS sub-dimensions of the time elapsed after the diagnosis of COVID-19 (p > 0.05).

Table 3
The relationship between the total and sub-dimensions' PTDS and PTGI mean scores of the participants (n = 175).

Scales and Sub-Dimensions	1	2	3	4	5	6	7	8	9	10
1. PTDS-Severity of the traumatic event	1									
2. PTDS-Effect of the traumatic event	.368**	1								
3. PTDS-Stress symptom level-Reexperiencing	.273**	.360**	1							
4. PTDS-Stress symptom level-Avoidance	.269**	.220**	.509**	1						
5. PTDS-Stress symptom level-Hyperarousal	.266**	.260**	.389**	.408**	1					
6. PTDS total score	.340**	.351**	.793**	.830**	.744**	1				
7. PTGI-Change in the relationships with others	.113	.108	.309**	.177	.113	.251**	1			
8. PTGI-Change in the philosophy of life	.237**	.199**	.385**	.274**	.327**	.412**	.586**	1		
9. PTGI-Change in the self	.017	.115	.286**	.078	.061	.175*	.577**	.457**	1	
10. PTGI Total Score	.131	.163*	.385**	.197**	.182*	.319**	.859**	.779**	.853**	1

* p<0.05.

** p<0.001.

Discussion

It is known that the COVID-19 pandemic affects a large number of people, the most affected are inpatients in the ICU, and it is seen that it has features similar to traumatic events as it has many disturbing psychological effects (Horesh & Brown, 2020). It is thought that this situation may pose a serious problem in terms of community mental health in the future. In this context, it is important to recognise the symptoms of posttraumatic stress in the early period and to plan professional help activities for them. When the results of this study were examined in terms of posttraumatic stress, it was determined that the severity of the traumatic event (intensive care process due to COVID-19) and the effect of the traumatic event on the patients were high. The fact that the effect of the traumatic event is still high even though it has been at least 3 months after being discharged from the intensive care unit due to COVID-19 may be associated with the continuation of the pandemic process and the increase in the number of deaths due to COVID-19. In addition, it was determined that the traumatic stress symptoms of the patients were moderate. In line with this information, COVID-19 can be characterised as a traumatic experience requiring hospitalisation, especially in severe cases (Tarsitani et al., 2021). In the research that Tarsitani et al. (2021) conducted, it was determined that 10.4% of the patients who were hospitalised for COVID-19 infection were diagnosed with PTSD as a result of a 3-month follow-up, and 8.6% were diagnosed with sub-threshold PTSD, which causes significant distress and impairment. As a result of another study, PTSD symptoms were reported in 12.2% of the patients diagnosed with COVID-19 (Qi et al., 2020). Similarly, Mazza et al. (2020) reported that PTSD was seen in 28% of the patients in their follow-up study conducted one month after discharge with 402 patients who survived COVID-19 (Mazza et al., 2020). When the international literature is examined, it has been determined that the prevalence of PTSD is quite high in studies conducted with healthcare professionals and students during the COVID-19 pandemic, and in studies conducted with patients receiving ventilation support and patients receiving intensive care treatment (Chamberlain et al., 2021; Li et al., 2021; Liu et al., 2020; Zhao et al., 2020). Considering the data of this study and other studies, it can be said that the patients receiving intensive care treatment due to COVID-19 are in the risk group for PTSD. In a study examining PTSD symptoms in COVID-19 survivors, it was

Table 4
Determining the predictive power of the participants' posttraumatic growth on the posttraumatic stress symptoms (n = 175).

Scales	B	Standardized error	Beta	t	P
PTDS	33,007	3,055	.319	10,804	p<0.001
PTGI	.161	.036		4,421	p<0.001
R:	0,319	R²: 0.101	F: 19.541		(p<0,001)

Table 5
Comparison of PTGI and PTSD scores according to participants' affected status from COVID-19 and time elapsed after COVID-19 treatment (n = 175).

	PTGI Total			PTGI Sub-dimensions			PTSD Sub-dimensions			Severity of the Traumatic Event												
	X ± SD	F*	p**	X ± SD	F*	p**	X ± SD	F*	p**	X ± SD	F*	p**	X ± SD	F*	p**							
																Change in the Life Philosophy	Change in the Relationships with Others	Change in the Self	Stress Symptom Level of the Traumatic Event	Effect of the Traumatic Event		
Degree of Affection by COVID-19	Little affected	39,80 ± 15,30	9,34	.000	6,74 ± 6,00	5,33	.002	11,61 ± 6,80	6,80	.000	21,457,77	6,78	.000	17,00 ± 6,99	5,91	.001	4,90 ± 2,19	3,06	.029	2,96 ± 1,58	2,42	.068
	Affected	36,63 ± 17,74			5,55 ± 5,47			11,23 ± 7,44			19,84 ± 8,49			16,23 ± 9,33			4,55 ± 1,69			2,40 ± 1,47		
	Very much affected	50,72 ± 18,21			9,68 ± 6,67			15,95 ± 6,95			25,10 ± 8,31			21,22 ± 9,14			5,41 ± 1,63			2,96 ± 1,26		
Time Elapsed After COVID-19 Treatment	Extremely affected	53,32 ± 18,47			9,41 ± 5,95			16,50 ± 6,56			27,41 ± 9,66			23,00 ± 10,48			5,68 ± 2,31			3,14 ± 1,39		
	Affected	38,00 ± 12,75	14,72	.000	5,00 ± 2,82	9,00	.000	15,66 ± 4,88	12,08	.000	17,33 ± 10,63	10,06	.000	18,66 ± 8,09	2,94	0,99	5,33 ± 1,63	.816	.444	3,16 ± 1,60	.712	.492
	4-7 months	40,69 ± 16,79			6,76 ± 6,08			12,13 ± 7,00			21,80 ± 7,88			18,17 ± 9,15			4,99 ± 1,87			2,74 ± 1,40		
8-11 months	56,46 ± 19,60			10,90 ± 6,13			17,82 ± 7,00			27,74 ± 9,72			21,62 ± 10,27			5,40 ± 2,11			3,00 ± 1,47			

F*: Test Value.
p**: Significant.

noted that PTSD symptoms were disproportionately increased in those requiring inpatient admission, especially those requiring ventilation support, compared with those with mild COVID-19 symptoms treated at home (Chamberlain et al., 2021). At this point, it is recommended to evaluate the patients in terms of PTSD after discharge and to provide the necessary preventive and therapeutic services. In this process, the nurses should recognise the patient's early traumatic symptoms and reduce the patient's stress level by providing the patient with the ability to cope with stress. Cognitive behavioural therapy applications should be included in the long-term treatment process to treat the mental damage caused by the traumatic experience.

When the traumatic stress symptom levels of the patients were examined, it was determined that they experienced mostly avoidance symptoms, followed by hyperarousal symptoms.

COVID-19 can affect large numbers of people and re-infect people at a later date. In addition to these features, factors such as people's constant vigilance, the intense negative emotions and thoughts, and the negative predictions of the future are associated with traumatic stress (Horesh & Brown, 2020). Individuals often engage in avoidance behaviour to cope with the effects of traumatic stress. In avoidance, individuals try to stay away from distressing memories, thoughts, or feelings. They try to avoid external reminders (people, places, conversations, activities, objects, situations) that arouse thoughts or feelings about the traumatic event(s) (Köroğlu, 2013). These behaviours may cause the person to leave the treatment process unfinished or even to move away from the treatment process. The study by Sanchez-Gomez et al. stated that overstimulation has an impact on individual outcomes such as fear of COVID-19 and mental health (Sanchez-Gomez et al., 2021). The high symptoms of hyperarousal may be due to many reasons, such as the ongoing uncertainty about the pandemic process, the unpredictability of the long-term effects of the virus, and the constant sharing of daily national and international coronavirus data in the media. Similarly, over-reactive behaviour has been observed in studies conducted during and after epidemics such as SARS and Ebola (Person et al., 2004; Shultz et al. 2016).

Reactions to traumatic events may differ between individuals. Because traumatic events destroy people's previous schemas and basic psychological assumptions about the world as a safe and predictable place (Janoff-Bulman & Berg, 1998). This change, which occurs in basic assumptions after the traumatic experience, may lead to posttraumatic stress reactions and some disorders related to the traumatic event, as well as posttraumatic growth in the person exposed to the trauma. Positive changes in the posttraumatic growth state are believed to be activated by traumatic events that significantly threaten and disrupt the individual's basic schemas. The events that initiate posttraumatic growth are like seismic events on a psychological level. Individuals will not evaluate the negative situation experienced in the processes of coping with trauma as destruction; on the contrary, they will see it as a springboard that will enable them to establish new psychological structures. They will give a new direction to their lives with the new psychological structures they have created, they will start to cope with similar traumas better based on the traumas they have experienced, and they will stand stronger in the face of the traumatic event (Tedeschi et al., 1998). In the current study, it was determined that patients hospitalised in the intensive care unit with the diagnosis of COVID-19 experienced a growth close to the middle level after the treatment. A review of the literature, Pietrzak et al., (2021) stated that individuals with symptoms of PTSD associated with COVID-19 experience moderate or higher levels of PTG (Pietrzak, Tsai & Southwick, 2021). Yan et al., (2021), in another study with discharged COVID-19 patients, shows that post-traumatic growth is experienced (Yan, et al., 2021). Tomaszek & Muchacka-Cymerman (2020) reported that they experienced PTG in a study conducted with people with PTSD symptoms in the COVID-19 pandemic (Tomaszek & Muchacka-Cymerman, 2020).

It was determined that the patients experienced the most growth in the change in the self sub-dimension of the posttraumatic growth (PTG).

Looking at the studies with different sample groups, in the study of Tanrıverdi et al. (2012) in which they examined posttraumatic growth in 105 cancer patients, it was determined that the patients experienced the most growth in the sub-dimension of Change in the Self (Tanrıverdi et al., 2012). In line with the theories of Janoff-Bulman and Berg (1998), traumatic events strike the individual's inner world and shake the assumptions, causing the person exposed to the event to question his/her positive beliefs about the world and himself/herself and to realise his/her vulnerability (Janoff-Bulman and Berg, 1998). In support of this statement, studies showed that the degree to which our core beliefs about the world are challenged is related to the amount of posttraumatic growth (Cann et al., 2010). The person re-evaluates his/her life and priorities in life in the process of repairing himself/herself after the event. This process causes them to show more inclination toward some areas that they consider important in their life (Can Gür and Tanrıverdi, 2021). In the situation described as a change in the self, post-traumatic individuals' perspectives on themselves transform. On the one hand, they see themselves as more resilient; on the other hand, they accept their vulnerabilities and limitations. The most important step for post-traumatic growth is that individuals see themselves not as victims of trauma, but as survivors after trauma (Tedeschi et al., 1998).

When the relationship between the PTSD total score and its sub-dimensions was examined, a positive and significant relationship was found between the PTSD total score of all sub-dimensions of the scale. Patients who have just passed 3 months after being discharged from the intensive care unit due to COVID-19 have higher perceptions of the severity of the traumatic event. It was determined that traumatic stress symptoms increased as the severity of the traumatic event and its effect on the person increased. A positive and significant relationship was found between posttraumatic stress levels and traumatic growth. When the literature is examined, there are studies with different samples where there is a positive relationship between PTSD symptoms and post-traumatic growth (Çınarbaş and Doğan, 2019; Cui et al., 2021; El-Gabalawy et al., 2021; Pietrzak et al., 2021). The PTG is the "antithesis" of posttraumatic stress disorder (PTSD) and demonstrates beneficial changes in cognitive and emotional life. Therefore, posttraumatic growth is not the same as a reduction in stress or an increase in psychological well-being. As a result, growth and emotional distress can coexist for some people. In other words, individuals can be in a stressful situation and can experience a growth at the same time (Tedeschi et al., 1998).

As the degree of being affected by covid 19 increases, posttraumatic growth and traumatic stress symptom levels increase. The increase in posttraumatic growth and traumatic stress symptoms may be related to the continuation of the effect of the event, that is, the continuation of the pandemic in this process. When the cognitive assessment processes were considered, it was reported that the perception of more danger and harm revealed more growth (Linley & Joseph, 2004).

Posttraumatic growth increases as the time elapsed after the completion of the treatment of the patients. Until now, it has been stated that growth should be considered a result of trauma, but it has been raised as to whether growth is a self-improving process that helps to recover from trauma. It seems more appropriate to consider growth as a process, as the questioning and restructuring of basic assumptions after trauma can take place over time. However, "changes in some dimensions may also occur immediately after the event" (Tennen, 1998). Linley and Joseph (2004) stated that growth should be evaluated as a process that takes months or even years (Linley & Joseph, 2004).

Limitations

The most important limitation of the study is that it was studied with a relatively small sample group, which may limit the statistical power. Therefore, it is necessary to increase the sample size for the results to be more generalisable. Another limitation is the collection of data with self-report scales. For example, posttraumatic stress symptoms were not

determined by a clinical evaluation by a mental health professional, but evaluating only the patient's self-report is a limitation.

Conclusion

It was determined that the patients considered being treated in the intensive care unit due to COVID-19 as a traumatic event and experienced post-traumatic growth and stress symptoms. After the intensive care process, patients should be supported to develop coping strategies that address their traumatic stress and encourage their posttraumatic growth. PTG seems to be a promising approach to combat the traumatic effects of the pandemic. Prospective and longitudinal studies are needed to evaluate the effectiveness of psychotherapeutic interventions to increase posttraumatic growth and treat stress symptoms during the pandemic process.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- Bahar, A., Buldak, C.I., 2020. Nursing Management of COVID-19 Patients Who is in Intensive Care Unit. *Journal of Health Science Yüksek İhtisas University*. 1, 78–84.
- Calhoun, L.G., Tedeschi, R.G., 1998. Beyond recovery from trauma: Implications for clinical practice and research. *Journal of Social Issues*. 54 (2), 357–371. <https://doi.org/10.1111/0022-4537.701998070>.
- Can Gür, G., & Tanrıverdi D, 2021. Posttraumatik Büyüme: Zorluklardan güç toplamak: Tanrıverdi, D (Eds), Çukurova Nobel Publisher, Antalya, s. 407-424. ISBN: 978-605-2369-33-3.
- Calhoun, L.G., Tedeschi, R.G., 2014. posttraumatic growth: theory and method. *Handbook of posttraumatic growth: Research and practice*. Routledge, pp. 3–24.
- Cann, A., Calhoun, L.G., Tedeschi, R.G., Kilmer, R.P., Gil-Rivas, V., Vishnevsky, T., Danhauer, S.C., 2010. The core beliefs inventory: A brief measure of disruption in the assumptive world. *Anxiety, Stress & Coping* 23 (1), 19–34. <https://doi.org/10.1080/10615800802573013>.
- Chamberlain, S.R., Grant, J.E., Trender, W., Hellyer, P., Hampshire, A., 2021. Post-traumatic stress disorder symptoms in COVID-19 survivors: online population survey. *Bjpsych Open* 7 (2). DOI: <https://doi.org/10.1192/bjo.2021.3>.
- Cordova, M.J., Cunningham, L.L., Carlson, C.R., Andrykowski, M.A., 2001. Posttraumatic growth following breast cancer: a controlled comparison study. *Health Psychology* 20 (3), 176. <https://doi.org/10.1037/0278-6133.20.3.176>.
- Çınarbaş, D.C., Doğan, F., 2019. Travma sonrası stres ile prososyal davranış arasındaki ilişki travma sonrası büyümenin rolü. *Nesne-Psikoloji Dergisi*. <https://doi.org/10.7816/nesne-07-15-04>.
- Dirik, G., 2006. Posttraumatic Growth and Psychological Distress Among Rheumatoid Arthritis Patients: An Evaluation within the Conservation of Resources Theory, Master Thesis. Middle East Technical University, Department of Psychology, Ankara <https://open.metu.edu.tr/bitstream/handle/11511/16533/index.pdf>.
- El-Gabalawy, R., Mackenzie, C.S., Starzyk, K.B., Sommer, J.L., 2021. Understanding the relationship between traumatic suffering, posttraumatic growth, and prosocial variables. *Journal of American College Health* 69 (7), 710–718.
- Foa, E.B., Cashman, L., Jaycox, L., Perry, K., 1997. The validation of a self-report measure of posttraumatic stress disorder: The Posttraumatic Diagnostic Scale. *Psychological Assessment* 9 (4), 445–451.
- Fredrikson, S.T.D., Ringsberg, K.C., 2007. Living the situation stress-experiences among intensive care patients. *Intensive and Critical Care Nursing*. 23 (3), 124–131. <https://doi.org/10.1016/j.iccn.2006.09.002>.
- Horesh, D., Brown, A.D., 2020. Traumatic stress in the age of COVID-19: A call to close critical gaps and adapt to new realities. *Psychological Trauma: Theory, Research, Practice, and Policy*. 12 (4), 331–335. <https://doi.org/10.1037/tra0000592>.
- Dikmen-Yıldız, P., Ayers, S., Phillips, L., 2017. Screening for birth-related PTSD: psychometric properties of the Turkish version of the Posttraumatic Diagnostic Scale in postpartum women in Turkey. *European Journal of Psychotraumatology* 8 (1), 1306414. <https://doi.org/10.1080/20008198.2017.1306414>.
- Janoff-Bulman, R., & Berg, M., 1998. Disillusionment and the creation of value: From traumatic loss to existential gains. In J. Harvey (Ed.) *Perspectives on loss: A sourcebook*, Washington, DC, Taylor & Francis. 29.
- Joseph, S., 2009. Growth following adversity: Positive psychological perspectives on posttraumatic stress. *Psychological Topics*. 18, 335–344.

- İnci, F., Boztepe, H., 2013. Post traumatic growth: if something not killing could be strengthened?/Travma sonrası buyume: öldürmeyen aci guclendirir mi? *Journal of Psychiatric Nursing*. 4 (2), 80–85. <https://doi.org/10.5505/phd.2013.29392>.
- Janiri, D., Carfi, A., Kotzalidis, G. D., Bernabei, R., Landi, F., Sani, G., & Post-Acute Care Study Group, 2021. Posttraumatic stress disorder in patients after severe COVID-19 infection. *JAMA Psychiatry*. 78 (5), 567–569. <https://doi.org/10.1001/jamapsikiyatri.2021.0109>.
- Kardaş, F., Tanhan, F., 2018. Van depremini yaşayan üniversite öğrencilerinin travma sonrası stres, travma sonrası büyüme ve umutsuzluk düzeylerinin incelenmesi. *Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi* 15 (1), 1–36. <https://doi.org/10.23891/efdyyu.2018.60>.
- Karlsson, V., Bergbom, I., Forsberg, A., 2012. The lived experiences of adult intensive care patients who were conscious during mechanical ventilation: a phenomenological-hermeneutic study. *Intensive and Critical Care Nursing*. 28 (1), 6–15. <https://doi.org/10.1016/j.iccn.2011.11.002>.
- Köröglü, E., 2013. American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-V). ISBN 978-975-300-198-4.
- Li, Y., Scherer, N., Felix, L., & Kuper, H., 2021. Prevalence of depression, anxiety and post-traumatic stress disorder in health care workers during the COVID-19 pandemic: A systematic review and meta-analysis. *PLoS One*. 16(3), e0246454.
- Linley, P. A., & Joseph, S., 2004. Positive change following trauma and adversity: A review. *Journal Of Traumatic Stress: Official Publication Of The International Society For Traumatic Stress Studies*. 17(1), 11–21. <https://doi.org/10.1023/B:JOTS.0000014671.27856.7e>.
- Liu, D., Baumeister, R. F., Veilleux, J. C., Chen, C., Liu, W., Yue, Y., & Zhang, S., 2020. Risk factors associated with mental illness in hospital discharged patients infected with COVID-19 in Wuhan, China. *Psychiatry Research*. 292, 113297. <https://doi.org/10.1016/j.psychres.2020.113297>.
- Litz, B. T., 2014. Resilience in the aftermath of war trauma: a critical review and commentary. *Interface Focus*, 4(5), 20140008. doi: 10.1098/rsfs.2014.0008.
- Mazza, M.G., De Lorenzo, R., Conte, C., Poletti, S., Vai, B., Bollettini, I., Melloni, E.M.T., Furlan, R., Ciceri, F., Rovere-Querini, P., Benedetti, F., 2020. Anxiety and depression in COVID-19 survivors: Role of inflammatory and clinical predictors. *Brain, behavior, and immunity*. 89, 594–600.
- McKinney, A.A., Melby, V., 2002. Relocation stress in critical care: a review of the literature. *Journal of Clinical Nursing*. 11 (2), 149–157. <https://doi.org/10.1046/j.1365-2702.2002.00577.x>.
- Murray, H., Grey, N., Wild, J., Warnock-Parkes, E., Kerr, A., Clark, D.M., Ehlers, A., 2020. Cognitive therapy for post-traumatic stress disorder following critical illness and intensive care unit admission. *The Cognitive Behaviour Therapist* 13. <https://doi.org/10.1017/S1754470X2000015X>.
- Nietzsche, F., 2005. Twilight of the idols (J. Norman, Trans.). In A. Ridley & J. Norman (Eds.), *The anti-Christ, Ecce homo, Twilight of the idols and other writings* (pp. 153–229). Cambridge, UK: Cambridge University Press. (Original work published 1888).
- Cui, P.P., Wang, P.P., Wang, K., Ping, Z., Wang, P., Chen, C., 2021. Post-traumatic growth and influencing factors among frontline nurses fighting against COVID-19. *Occupational and Environmental Medicine* 78 (2), 129–135.
- Park, C.L., Helgeson, V.S., 2006. Introduction to the special section: growth following highly stressful life events—current status and future directions. *Journal of Consulting and Clinical Psychology* 74 (5), 791. <https://doi.org/10.1037/0022-006X.74.5.791>.
- Person, B., Sy, F., Holton, K., Govert, B., Liang, A., Garza, B., Gould, D., Hickson, M., McDonald, M., Meijer, C., Smith, J., Veto, L., Williams, W., Zauderer, L., 2004. Fear and stigma: the epidemic within the SARS outbreak. *Emerging Infectious Diseases*. 10 (2), 358–363.
- Pietrzak, R.H., Tsai, J., Southwick, S.M., 2021. Association of Symptoms of Posttraumatic Stress Disorder With Posttraumatic Psychological Growth Among US Veterans During the COVID-19 Pandemic. *JAMA Network Open*. 4 (4), e214972. <https://doi.org/10.1001/jamanetworkopen.2021.4972>.
- Qi, R., Chen, W., Liu, S., Thompson, P.M., Zhang, L.J., Xia, F., Lu, G.M., 2020. Psychological morbidities and fatigue in patients with confirmed COVID-19 during disease outbreak: prevalence and associated biopsychosocial risk factors. *MedRxiv*. <https://doi.org/10.1101/2020.05.08.20031666>.
- Righy, C., Rosa, R.G., da Silva, R.T.A., Kochhann, R., Migliavaca, C.B., Robinson, C.C., Teche, S.P., Teixeira, C., Bozza, F.A., Falavigna, M., 2019. Prevalence of post-traumatic stress disorder symptoms in adult critical care survivors: a systematic review and meta-analysis. *Critical Care*. 23 (1) <https://doi.org/10.1186/s13054-019-2489-3>.
- Rossi, R., Soccì, V., Talevi, D., Mensi, S., Ntölu, C., Pacitti, F., Di Marco, A., Rossi, A., Siracusano, A., Di Lorenzo, G., 2020. COVID-19 pandemic and lockdown measures impact on mental health among the general population in Italy. *Frontiers in psychiatry*. 11 <https://doi.org/10.3389/fpsy.2020.00790>.
- Rutter, M., 2007. Resilience, competence, and coping. *Child Abuse Neglect* 31, 205–209. <https://doi.org/10.1016/j.chiabu.2007.02.001>.
- Samuelson, K.A., Lundberg, D., Fridlund, B., 2007. Stressful experiences about depth of sedation in mechanically ventilated patients. *Nursing in Critical Care* 12 (2), 93–104. <https://doi.org/10.1111/j.1478-5153.2006.00199.x>.
- Sanchez-Gomez, M., Giorgi, G., Finstad, G.L., Urbini, F., Foti, G., Mucci, N., Zaffina, S., León-Perez, J.M., 2021. COVID-19 pandemic as a traumatic event and its associations with fear and mental health: A cognitive-activation approach. *International Journal of Environmental Research and Public Health* 18 (14), 7422.
- Sapolsky, R.M., 2004. *Why zebras don't get ulcers: The acclaimed guide to stress, stress-related diseases, and coping*. Holt paperbacks.
- Shakespeare-Finch, J.E., Smith, S.G., Gow, K.M., Embelton, G., Baird, L., 2003. The prevalence of post-traumatic growth in emergency ambulance personnel. *Traumatology*. 9 (1), 58–71. <https://doi.org/10.1177/153476560300900104>.
- Shultz, J.M., Cooper, J.L., Baingana, F., Oquendo, M.A., Espinel, Z., Althouse, B.M., Marcelin, L.H., Towers, S., Espinola, M., McCoy, C.B., Mazurik, L., Wainberg, M.L., Neria, Y., Rechkemmer, A., 2016. The role of fear-related behaviors in the 2013–2016 West Africa Ebola virus disease outbreak. *Current Psychiatry Reports*. 18 (11) <https://doi.org/10.1007/s11920-016-0741-y>.
- Smith, G., Nielsen, M., 1999. ABC of intensive care. Criteria for admission. *BMJ* 318 (7197), 1544–1547. <https://doi.org/10.1136/bmj.318.7197.1544>.
- Tanrıverdi, D., Savaş, E., Can, G., 2012. Posttraumatic growth and social support in Turkish Patients with cancer. *Asian Pacific J Cancer Prev*. 13 (9), 4311–4431. <https://doi.org/10.7314/APJCP.2012.13.9.4311>.
- Tarstiani, L., Vassalini, P., Koukopoulos, A., Borrazzo, C., Alessi, F., Di Nicolantonio, C., Serra, R., Alessandri, F., Ceccarelli, G., Mastroianni, C.M., d'Ettorre, G., 2021. Post-traumatic stress disorder among COVID-19 survivors at 3-month follow-up after hospital discharge. *Journal of General Internal Medicine*. 36 (6), 1702–1707.
- Tedeschi, R.G., Calhoun, L.G., 1996. The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress*. 9 (3), 455–471.
- Tedeschi, R.G., Calhoun, L.G., 2004. Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry*. 15 (19), 1–18.
- Madde Bağimlılığı Tedavi Merkezi. (2014). Travmanın etkisini anlamak. Davranışsal sağlık hizmetlerinde travma bilinçli bakımda. Madde Bağimlılığı ve Ruh Sağlığı Hizmetleri İdaresi (ABD). <https://www.ncbi.nlm.nih.gov/books/NBK207191/> (Erişim Tarihi 9 Mayıs).
- Tedeschi, R.G., Park CL, & Calhoun, L.G., 1998. Posttraumatic growth: Conceptual issues. In R.G.Tedeschi, C.L. Park & L.G. Calhoun (Eds.), *Posttraumatic Growth: Positive Changes in the Aftermath of Crisis*. London: Lawrence Erlbaum Associates, Publishers. 1–23.
- Tedeschi, R.G., ve Calhoun, L. G., 1995. *Trauma and transformation: Growing in the aftermath of suffering*. Sage Publications.
- Tennen, H., ve Afleck, G. 1998. Personality and transformation in the face of adversity. Ed. R. G. Tedeschi, C. L. Park ve L. G. Calhoun. *Posttraumatic growth: Positive changes in the aftermath of crisis*. Mahwah, NJ: Lawrence Erlbaum Associates. pp. 65-98.
- Tomaszek, K., Muchacka-Cymerman, A., 2020. Thinking about my existence during COVID-19, I feel anxiety and awe—The mediating role of existential anxiety and life satisfaction on the relationship between PTSD symptoms and post-traumatic growth. *International Journal of Environmental Research and Public Health*. 17 (19), 7062. <https://doi.org/10.3390/ijerph17197062>.
- Ogńska-Bulik, N., Kobylarczyk, M., 2015. Relation between resiliency and post-traumatic growth in a group of paramedics: The mediating role of coping strategies. *International Journal of Occupational Medicine and Environmental Health* 28 (4), 707–719. <https://doi.org/10.13075/ijomh.1896.00323>.
- Yan, S., Yang, J., Ye, M., Chen, S., Xie, C., Huang, J., Liu, H., 2021. Post-traumatic Growth and Related Influencing Factors in Discharged COVID-19 Patients: A cross-sectional study. *Frontiers in Psychology*. 12, 1960. <https://doi.org/10.3389/fpsyg.2021.658307>.
- Yao, Z.F., Hsieh, S., 2019. Neurocognitive mechanism of human resilience: A conceptual framework and empirical review. *International journal of environmental research and public health* 16 (24), 5123. <https://doi.org/10.3390/ijerph16245123>.
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C.S., Ho, R.C., 2020. Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *Int. J. Environ. Health*. 17 (5), 1729. <https://doi.org/10.3390/ijerph17051729>.
- WHO. WHO Media Briefing. 2020; <https://www.who.int/dg/speeches/detail/who-director-general-opening-remarks-at-the-media-briefing-on-COVID-19-11-march-2020>. Accessed: 27th April 2021.
- Wu, Z., McGoogan, J.M., 2020. Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: summary of a report of 72 314 cases from the Chinese Center for Disease Control and Prevention. *JAMA*. 323 (13), 1239–1242.
- Wunsch, H., Mapstone, J., Brady, T., Hanks, R., Rowan, K., 2004. Hospital mortality associated with day and time of admission to intensive care units. *Intensive care medicine* 30 (5), 895–901. <https://doi.org/10.1007/s00134-004-2170-3>.
- Zhao, Y., An, Y., Tan, X., & Li, X., 2020. Mental health and its influencing factors among self-isolating ordinary citizens during the beginning epidemic of COVID-19. *Journal of Loss and Trauma*. 25(6-7), 580-593. <https://doi.org/10.1080/15325024.2020.1761592>.