Trauma Monthly 2023; 28(6): 984-993

10.30491/tm.2024.432360.1676

Trauma Monthly

Research Article

Personality Traits, Childhood Trauma, and Alexithymia Role in Post-Traumatic Stress Disorder and Post-Traumatic Growth Symptoms Following COVID-19

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Received 2023-06-09; **Accepted** 2023-09-07; **Online Published** 2023-12-27

Abstract

Introduction: This study aimed to assess the role of personality traits, childhood trauma, and alexithymia in PTSD and PTG symptoms in patients with COVID-19.

Methods: Data for 156 persons (including 131 females and 25 males) who recovered from COVID-19 were collected using NEO inventories, the childhood trauma questionnaire, the Toronto alexithymia scale, the Mississippi Scale for PTSD, and the PTG inventory.

Results: PTG symptoms were significantly and positively associated with personality traits (extraversion, agreeableness, and conscientiousness). The PTSD symptoms were positively correlated with neuroticism and negatively associated with agreeableness and conscientiousness. Moreover, a negative correlation was observed between emotional neglect and PTG symptoms. PTSD symptoms were seen to be positively and significantly correlated to the four dimensions of childhood trauma ($p < 0.001$). Finally, the most significant predictors of PTSD were symptoms including alexithymia ($\beta = 0.38$) and the physical abuse trait of childhood trauma ($\beta = 0.259$). PTG symptoms could be best predicted by conscientiousness ($\beta = 0.2$) and extraversion traits ($\beta = 0.196$).

Conclusion: The variables including alexithymia, personality traits, and childhood trauma can be used to decrease the adverse effects of trauma and increase positive psychological symptoms in our patients.

Keywords: Post-Traumatic-Stress, Post-Traumatic-Growth, Personality Dimensions, Alexithymia, Childhood Trauma, Covid 19.

Introduction

Extensive research have documented that people exposed to social crises not only have shown negative psychological symptoms or Post Traumatic Disorder (PTSD) but also positive psychological effects or Post Traumatic Growth (PTG) [1,2].

The Covid-19 pandemic has given rise to psychological and social challenges, with patients experiencing significant psychological stress. In the early stages of this disease, the stigma and fear surrounding it created a bottleneck in people's emotional and cognitive well-being, which can be described as a psychological crisis [2,3]. The crisis encompasses two dimensions: the first involves anxiety and tension, while the second pertains to problem-solving mechanisms, which can yield either successful or unsuccessful outcomes depending on the patient's adaptability [4].

These crisis events initially trigger a psychological disturbance, accompanied by intense feelings of fear, helplessness, and panic, which may eventually lead to either Post-Traumatic Stress Disorder (PTSD) or Post-Traumatic Growth (PTG)[5]. In simpler terms, traumatic and distressing events can result in adverse reactions and stress for individuals, but they can also lead to

personal growth, excellence, and positive consequences[6].

Throughout their illness, patients grapple with a range of negative emotions, including anxiety, depression, despair, fear, and panic, among others [7,8]. Some individuals, however, have experienced personal growth and excellence, leading to improvements in their quality of life [9]. These improvements include transformations in interpersonal relationships, shifts in one's outlook on life, changes in self-perspective, and the identification of new life opportunities, which collectively constitute the components of post-traumatic growth after adversity [10].

Psychological research has revealed that individuals who have faced a crisis often exhibit various symptoms. These symptoms encompass both psychological and physiological manifestations, such as fear, panic, and tension. Additionally, they may experience psychological numbness, characterized by feelings of dissociation, distress, incompetence, and frustration. Individuals in crisis may also struggle with anxiety, encounter thinking disorders like isolationism and obsession, and exhibit signs of depression, including sleep and eating disturbances, suicidal thoughts, and involuntary crying [11].

One crucial factor influencing the development of Post-Traumatic Stress Disorder (PTSD) and Post-Traumatic Growth (PTG) is the individual's personality dimensions. In individuals exposed to crises, differences in their psychological makeup can significantly impact whether they develop PTSD or experience PTG. A comparison between individuals with PTSD and those without it has shown that personality traits, particularly neuroticism, openness to experience, and conscientiousness, play a role in the development of PTSD [12].

Another key element affecting an individual's quality of life is alexithymia, a condition that pertains to a reduced ability to identify and recognize emotions [13]. Alexithymia can be a risk factor for various mental health conditions because those with this condition struggle to express their emotions verbally. This difficulty hinders emotional regulation and disrupts an individual's adaptability. Research has shown a correlation between childhood traumas and problems in emotional analysis, which is also linked to alexithymia. Furthermore, the severity of psychological symptoms is associated with alexithymia [14].

Childhood traumas are another significant factor linked to PTSD [14, 15, 16]. Childhood traumas encompass various forms, with abuse (emotional, sexual, and physical) and neglect (emotional and physical) being among the most critical types [17]. Studies in adults have indicated that approximately 25% of individuals who experienced childhood trauma develop PTSD symptoms [18].

It's imperative to explore the impact of these factors on individuals affected by Covid-19 in order to prevent mental injuries, promote personal growth, and enhance their quality of life following the crisis. Assessing the roles of alexithymia, emotional exposure styles, personality traits, and childhood trauma experiences can help predict whether individuals will experience PTG or develop PTSD in the aftermath of Covid-19. Alexithymia, emotional processing, and previous traumatic experiences may be key determinants of whether an individual develops PTSD or experiences PTG in the context of Covid-19.

Consequently, recognizing the influence of these factors on both positive and negative psychological outcomes can be highly beneficial, offering valuable insights for the development of effective treatment strategies to alleviate the adverse effects of post-crisis stress and enhance excellence and quality of life in patients. This study aims to investigate the roles of personality dimensions, childhood traumas, and alexithymia in the development of PTG and PTSD symptoms among Covid-19 patients who have emerged from the crisis.

Methods

In this cross-sectional study, individuals in Iran who had contracted Covid-19 between 2021 and 2022 and had been either hospitalized or placed under quarantine in their homes were included (in order to experience the severity of the disease more). So that A definitive diagnosis was established through a combination of a CT scan and a positive Covid-19 test result. These individuals were considered as having recovered from Covid-19 at the outset of the study, with a minimum of one month having passed since their last negative Covid-19 test. Furthermore, participants should not have a history of mental illness or be undergoing psychotherapy or receiving medication treatment at the time of the study.

The study initially involved a sample of 160 individuals, but four of them were later excluded due to incomplete survey responses.

Inclusion criteria for participants were as follows: 1) Willingness to participate in the research and completion of an informed consent form, 2) Age over 18 years, 3) A confirmed history of Covid-19, and 4) At least one month having elapsed since their last negative Covid-19 test. Exclusion criteria encompassed: 1) A self-reported history of drug abuse and severe psychiatric illnesses, 2) Current treatment with psychiatric medications or engagement in psychotherapy, 3) A history of psychiatric hospitalization, and 4) Lack of consent to partake in the research.

individuals who exhibited symptoms of PTSD and PTG based on the questionnaire outcomes underwent a clinical interview to validate the findings.

Measurement tools

This study used the online questionnaire to collect data. The questionnaire link was distributed on social networks (Telegram, Instagram, WhatsApp). Before completing the questions, brief information about the study's logic was provided to the participants, who completed the informed consent form. The sampling method was available, and the average time to answer the questions was 30 minutes.

Personal information questionnaire

The researchers designed this questionnaire according to the objectives of the current research. In this questionnaire, data such as age, gender, education, number and duration of disease, hospitalization, recovery time, lung disease, and disease severity were measured.

PTSD Questionnaire

The Mississippi Posttraumatic Stress Questionnaire is a self-report scale. This questionnaire, with 35 questions, evaluates the severity of post-traumatic stress disorder symptoms. The Cronbach's alpha coefficient of this test has been reported in the range of 0.86 to 0.94; Cronbach's alpha coefficient of this test was 0.79 in Iran [19]. This test has high validity and perfectly correlates with other post-traumatic stress disorder measurement tools [20].

PTG questionnaire

This questionnaire is organized into 21 items and five components to assess personal growth in people who have successfully passed a severely stressful event. The questions are on a six-point Likert scale from zero to five. This questionnaire includes subscales of communication with others, opportunities or new ways in life, personal ability, spiritual change, and appreciation or value of life. The highest score a person on this scale indicates high personal growth. Tedeschi et al. [6] reported that the overall alpha coefficient of the questionnaire is 0.9, and the range of Cronbach's alpha for each scale was estimated between 0.67 and 0.85. In Iran [21], Cronbach's alpha coefficient has been reported as 0.92.

NEO 5-Factor Personality Questionnaire (NEO-FFI)

This questionnaire contains 60 items that measure the five personality dimensions of neuroticism, extroversion, openness to experience, agreeableness, and conscientiousness. Each item is answered on a 5-point Likert scale (from disagree to agree). This test has good reliability and validity; for example, the alpha coefficient is reported between 0.68 (for agreeableness) and 0.86 (for neuroticism). In terms of validity, this personality tool explained 85% of the variance in convergent validity [28]. The Iranian version of this questionnaire also has suitable psychometric properties [22].

Alexithymia questionnaire

This questionnaire consists of 20 items scored on a Likert scale from strongly disagree to agree strongly. It measures three subtests: Difficulty Identifying Feelings (DIF), Difficulty Describing Feelings (DDF), and Externally-Oriented Thinking (EOT). Ghorbani (2002) obtained the alpha of this scale in the Iranian sample as 0.74 for DIF, 0.61 for DDF, and 0.50 for EOT. Mohammadi (2001) reported the validity of the whole hierarchy in the Iranian model using the dichotomization and retesting method as 0.74 and 0.72 and the scale's validity as 0.85.

Short form of childhood trauma questionnaire

This questionnaire is a screening tool to reveal persons with experiences of childhood abuse and neglect, has 28 items. Three questions are valid scales, and 25 other questions measure five areas of childhood injuries. These areas include sexual abuse, physical abuse,

emotional abuse, and emotional and physical neglect. The reliability of this questionnaire is in the range of 0.79 to 0.94 using test-retest methods and Cronbach's alpha [23]. Concurrent validity is determined through therapists' rating of childhood injuries in the field of 0.59 to 0.78 [17]. Its structural validity has also been investigated in Iran, and five proposed dimensions have been extracted [24].

Statistical Analysis

Statistical analyses were performed by SPSS 27.0. It was also assessed in a two-step process in which variables are predictors of PTG and PTSD. First, a Pearson correlation coefficient (r) examined the correlation between potential predictors and outcome measures. A $p < 0.05$ was set for inclusion in the regression analysis. After potential predictors were found, they were used stepwise to generate a linear regression model for the outcome. Regression coefficients (β), p-values, and adjusted R2 were used to estimate the goodness of fit in regression models.

Results

One hundred sixty people were included in the initial sample. Four people were excluded due to defects in completing the instrument, and the study was done on 156 participants. One hundred thirty-one participants were women (84%), and 25 were men (16%) who were Iranian adults over 18 years old. Table 1 shows the demographic data of the participants.

Table 1: Demographic data.

Variable		Frequency	Percentage (%)
Gender	Male	25	16
	Female	131	84
Age	< 20 years	5	3.2
	20-30 years	71	45.5
	30-40 years	51	37.2
	40-50 years	17	10.9
	> 50 years	12	7.7
Education degree	Diploma and less	34	21.8
	BS (Bachelor of Science)	68	43.6
	Master	40	25.6
	PhD	14	9.7
The number of corona infections	One time	140	89.7
	Two times	12	7.7
	> two times	4	2.6
hospitalization	Yes	147	94.2
	No	9	5.8

Table 2 shows the results of the skewness and kurtosis of the data. The value of the observed skewness for the studied variables is in the range (2, -2); the skewness of the research variables was normal, and its distribution was symmetrical except for physical abuse and sexual abuse. All distributions of the variables except physical and sexual abuse had normal kurtosis. Table 3 shows Pearson correlation between the research variables.

Based on the results obtained from Pearson's correlation, dimensions of personality traits and other independent variables had a significant correlation with PTG and PTSD. Based on this result, the independent variables that had a significant correlation with the dependent variables were entered into the step-by-step regression equation to determine the effect of each in predicting the dependent variables. The variance of PTG was 10.2%.

$F(2,153) = 8.568$, $p < 0.001$, $R2 = 0.102$

Therefore, it can be concluded that personality dimensions, childhood trauma, and alexithymia predicted 10.2% of the variance of PTG.

Table 2: The results of the skewness and kurtosis of the data.

Variable	Mean	Standard deviation	Kurtosis		Skewness	
			Statistic	**Sd**	**Statistic**	**Sd**
Neuroticism (N)	35.596	6.676	0.131	0.194	-0.228	0.386
Extraversion (E)	25.276	7.447	0.005	0.194	0.925	0.386
Openness (O)	38.840	6.165	-0.197	0.194	0.370	0.386
Agreeableness (A)	43.615	5.342	-0.082	0.194	-0.301	0.386
Conscientiousness (C)	45.296	6.772	-0.467	0.194	-0.021	0.386
DIF	15.128	5.142	0.385	0.194	-0.633	0.386
DDF	12.756	3.876	0.434	0.194	0.094	0.386
EOT	19.558	3.681	0.668	0.194	1.040	0.386
Emotional abuse	8.359	4.024	1.432	0.194	1.450	0.386
Physical abuse	6.712	3.389	3.051	0.194	10.83	0.386
Sexual abuse	6.462	2.984	3.077	0.194	11.36	0.386
Emotional neglect	10.891	4.230	0.780	0.194	0.498	0.386
physical neglect	7.462	2.954	1.944	0.194	5.025	0.386
New methods	21.109	4.731	-1.131	0.194	1.591	0.386
Relation to others	28.904	6.847	-0.942	0.194	1.013	0.386
Personal power	15.769	4.156	-0.758	0.194	0.437	0.386
Value of life	12.571	3.136	-0.859	0.194	0.409	0.386
Spiritual change	8.314	2.327	-0.751	0.194	0.464	0.386
Alexithymia	47.422	9.917	0.391	0.194	0.588	0.386
Childhood trauma	39.885	13.573	1.667	0.194	3.476	0.386
PTG	86.667	19.377	-1.106	0.194	1.299	0.386
PTSD	81.244	12.790	0.964	0.194	2.548	0.386

Table 3: Correlation results between variables.

	Variable	PTG	PTSD
Personality dimensions	Conscientiousness (C)	0.296 **	-0.234 **
	Agreeableness (A)	0.215 **	0.261 **
	Openness (O)	0.007	0.062
	Extraversion (E))	0.31 **	-0.095
	Neuroticism (N	-0.251 **	0.324 **
Types of childhood trauma	Childhood trauma	-0.085	0.34 **
	Physical neglect	-0.062	0.238 **
	Emotional neglect	-0.259 **	0.151
	Sexual abuse	-0.125	0.235 **
	Physical abuse	0.001	0.341 **
	Emotional abuse	0.004	0.326 **
***: It is significant at the 5% error. **: It is significant at the 1% error.**			

According to Table 4, the regression equation based on the last step is as follows:

PTG = 32.077 × 0.578 C + 0.543 × E

The results of Pearson's correlation showed that some dimensions of personality traits had a significant correlation with (PTSD. Accordingly, the independent variables that had a higher correlation with the dependent variable were entered into the stepwise regression equation to determine the effect of each in predicting the dependent variable. Mahalanobis distance function was used to measure multivariate outlier data. Three of the distances were more significant than or equal to the critical chi-square; therefore, they were excluded, and the analysis was performed again. The stepwise regression results showed that the variables were entered into the model in the order of the highest correlation. The alexithymia variable was entered into the model in the first step. It was about 16.6% of the

variance of PTSD. The 6.6% (related to physical abuse) was added to the variance of PTSD, and the amount of explained variance reaches 23.2%.

$F(2,150) = 22.680$, $p < 0.001$, $R2 = 0.232$

Therefore, it can be concluded that personality dimensions, childhood trauma, and alexithymia predicted 23.2% of the variance of PTSD. The variable's coefficients that entered into the model and their significance in the regression model are shown in Table 5.

The regression equation based on the last step is as follows:

$$PTSD = 50.080 + 0.476 \times TAS + 1.293 \times CTQ$$

Table 4: Coefficients of independent regression variables.

Variable	Coefficient	standard error	t statistic	P value
(Constant)	32.071	13.307	2.411	0.017
Conscientiousness (C)	0.578	0.235	2.465	0.015
Extraversion (E)	0.543	0.225	2.415	0.017

Table 5: Coefficients of independent regression variables.

Variable	β	standard error	t statistic	p- value
(Constant)	50.080	4.718	1.614	0.000
Alexithymia TAS	0.476	0.090	5.282	0.000
Physical abuse CTQ	1.293	0.358	3.606	0.000

Discussion

There was a significant positive correlation between extraversion, agreeableness, and conscientiousness with PTG symptoms. There was a significant negative correlation between neuroticism and PTG symptoms.

There was a significant positive correlation between neuroticism and PTSD symptoms after recovery. There was a significant negative correlation between agreeableness and conscientiousness with PTSD. Also, there was a significant negative correlation between emotional neglect and PTG symptoms after recovery and a positive and significant correlation between childhood trauma and PTSD symptoms after recovery. There was a significant positive correlation between the four dimensions of childhood trauma, namely emotional abuse, physical abuse, sexual abuse, and physical neglect with PTSD. Finally, the results of stepwise regression analysis showed that alexithymia and the physical abuse dimension of childhood trauma were the most important predictors of PTSD, respectively. This analysis showed that conscientiousness and extroversion were the most important predictors of PTG symptoms.

There is a significant negative correlation and a significant positive correlation between neuroticism and PTG symptoms and PTSD symptoms, respectively, which is according to other studies [25, 26,27]. Neuroticism is negatively related to PTG. Since neurotic people have less ability to cope adaptively with life's stressful factors, they are more likely to interpret natural conditions as threatening or small deprivations as extreme despair [5]. In critical situations, such as diseases, these people cannot adapt and manage negative thoughts; anxiety makes it very annoying to bear the uncertainty of recovery or non-recovery of the illness. These people are highly vulnerable to stressful situations, so the more neurotic characteristics in a person, the ability to reset schemas and values, promote altruism and interpersonal relationships, self-reliance, and emotional management will decrease, and the

symptoms will decrease. PTSD symptoms like irritability, anxiety and negative overgeneralization are increased.

According to other research, the present study on conscientiousness showed that being conscientious makes people have more self-discipline and accuracy and pursue their goals with more tenacity, which increases the symptoms of PTG [6,28]. Moral people have progressivism tendencies along with discipline and efficiency, which causes them to re-evaluate their goals toward progress. They are the ability to control the impulse to achieve one's goals, which makes the ability to control emotions higher and less vulnerable. As a result, this personality trait has a negative relationship with PTSD symptoms.

According to An Y et al. study, people with agreeableness have more chances to understand positive changes after experiencing a crisis. Being agreeable to people increases the likelihood of PTG [29]. Due to trust, altruism, and obedience, these people have more tendencies to improve interpersonal relationships and reorganize their relationships after facing a traumatic event. Also, high trust and honesty can be related to friendship and self-reliance. This personality factor has a negative association with PTSD symptoms.

In the present study, the direct effect of extroversion on PTG was observed, according to some studies [27, 30]. But a relationship between extraversion and PTSD has not been observed. Tedeschi RG et al. reported that extraversion significantly correlates with PTG symptoms [6]. Extroversion and openness to experience have a positive relationship with PTG. Mattson E et al. declared that extroversion and openness to experience positively correlate with PTG [31]. Also, according to research, our results showed extroversion directly affected increasing PTG [29]. Extroverts are more likely to share their feelings with others, which can cause PTG. Another reason for this phenomenon can be that extroverted people usually have more optimism than introverted people [32]. There are several findings that optimism causes PTG. Optimistic people tend to focus on more critical issues and abandon unattainable goals, which can cause PTG [33].

There was contradictor research about the relationship between extraversion and PTG or PTSD [34]. For example, several studies have shown that extroversion is one of the best predictors of PTG and negatively correlates with PTSD [35, 36]. However, other studies didn't report a relationship between extroversion and PTSD [37] or PTG [38]. This disagreement may be due to cultural differences in different nationalities. Therefore, the effect of extraversion on PTSD and PTG needs more research.

Some researchers have shown that all five personality factors can play an essential role in creating PTG or PTSD [27]. Neuroticism often correlates positively with anxiety symptoms and PTSD [3]. Extraversion is positively related to PTG symptoms [6]. Openness is associated with the tendency to use cognitive strategies that increase PTG symptoms [6]. Agreeable people have more chances to understand positive changes after experiencing a crisis, and conscientiousness makes people have more self-discipline and accuracy and pursue their goals with more tenacity, which increases post-traumatic growth symptoms [6,28].

The PTSD score has a significant correlation with the scores of emotional abuse (0.326), physical abuse (0.341), sexual abuse (0.234), and physical neglect (0.238) in this study; Therefore, there is a relationship between these types of childhood trauma and PTSD symptoms in patients who have recovered from Covid-19. It has been shown in various studies that in soldiers who suffered PTSD in wars, PTSD symptoms were related to childhood traumas [39]. In addition, the increase in childhood trauma is related to the rise in different types of PTSD symptoms simultaneously [40]. A history of experiencing emotional neglect and emotional abuse will increase anxiety, depression, post-traumatic stress, and physical symptoms. Physical and sexual abuse is an essential predictor of the symptoms of psychological and physical diseases [41].

Our results showed that sexual, physical, and emotional abuse in childhood was related to the development of PTSD symptoms in people who recovered from the disease of Covid-19. These results are according to research that reported that the experience of sexual and physical abuse in childhood is associated with an increase of more than six times the chance of PTSD. Also, women who experience sexual abuse are more than twice as likely not to receive social support as other people. In addition, the possibility of re-rape in

adulthood is more for people who were sexually abused, decreasing the chance of receiving social support [42]. Not receiving social support causes fear, disgust, and communication problems in people, which can cause a lack of emotional expression when recalling memories and avoiding unexpressed thoughts and emotions.

Our study and other studies showed that physical neglect causes behavioral and psychological problems, including PTSD in adulthood, and in the face of adult traumas, the risk incidence of PTSD increases [43]. Neglecting the physical needs of a child causes psychological damage. Physical neglect is a risk factor for developing psychological disorders [44]. Therefore, according to present research, the more the experience of childhood trauma in the patients cause more likely the symptoms of PTSD. Our study showed a relationship between childhood trauma of emotional neglect and PTSD symptoms in patients who had recovered from Covid-19.

Our study showed only that emotional neglect has a negative relationship with PTG. A person suffering from emotional neglect will likely have future problems in relationships with others. He is less likely to interact with others and receive social support; because social support is one of the essential and influential factors in creating PTG symptoms [32]. Muller et al. showed that emotional neglect in childhood, by the level of oxytocin, causes social dysfunction by creating fear and isolation in adulthood. It reduces interaction with others, empathy, and altruism, which are components of PTG. [45].

This study showed that conscientiousness and extroversion are the strongest predictors of PTG symptoms. Conscientiousness shows that a person has competence, self-regulation, self-control, and the ability to control impulses to achieve their goals, which makes them able to handle higher emotions. Conscientious people will tend to rebuild their schemas and values due to their progressiveness and responsibility.
Extraversion was another predictor of the severity of PTG symptoms. Extroverted people are more likely to share their feelings, express emotions, and socialize with others; they will have more empathy and strengthen relationships, which can cause PTG. Another reason for this phenomenon can be that extroverted people usually have more optimism than introverted people [32]. There are several results that optimism causes PTG. Optimistic people tend to focus on more critical issues and abandon unattainable goals, which can cause PTG.

The study showed that alexithymia and childhood trauma could not predict PTG. Because the accurate description and understanding of emotions can cause the correct processing and style of dealing with negative emotions, and by preventing the suppression and avoidance of emotions, it can reduce the symptoms of PTSD and become the cause of PTG after the crisis. The absence of traumatic childhood experiences can be helpful in the direction of trusting oneself and others, altruism, and focusing on an optimistic worldview, spirituality, and the growth of excellence after the crisis. According to the results, alexithymia and childhood trauma are the strongest predictors of the severity of PTSD symptoms, respectively. In this study, alexithymia had more power in predicting the severity of PTSD symptoms, which is in line with the opinion of Potica et al. (2020) [46]. they showed that alexithymia was very common among PTSD people and that 42% of them have alexithymia. It seems that the cause of this coexistence is the overlap of symptoms of alexithymia and PTSD in the context of emotional numbness.

The existence of difficulty in recognizing and describing emotions and the presence of objective thinking in a person can lead to suppression and avoidance of the correct expression of emotions. This issue can lead to the inability to process negative emotions properly. It may cause symptoms of numbness, avoidance, repeatedly finding ways of disturbing emotions in dreams, ringing in the ears, and other signs of PTSD. Therefore, the inability to recognize and describe feelings and emotional numbness were strong predictors of PTSD symptoms in patients with covid-19. Because these people experienced the trauma, faced their death, and were exposed to the news of the mortality of patients due to emotional ataxia, emotional numbness explains PTSD symptoms. Experience of childhood trauma and injury is another predictor of PTSD symptoms in adulthood. The increase in childhood trauma is related to the rise in different types of experienced PTSD symptoms at the same time [40]. A history of childhood trauma will increase anxiety, depression, PTSD, and

physical symptoms. Especially since physical and sexual abuse is an essential predictor of symptoms of psychological and physical diseases [41].

Neglecting a child's physical and emotional needs during his growth causes psychological damage to him. This neglect is a risk factor for developing psychological disorders [44]. The early experience of childhood abuse is closely related to the early development of depression and anxiety in young people [47]. Depression, anxiety, and psychological injuries will increase PTSD symptoms after experiencing trauma in adulthood. Therefore, people who have faced the crisis of illness and death in the covid-19 epidemic, if they experience childhood trauma and injuries, are more likely to suffer from PTSD.

Conclusion

The variables including alexithymia, personality traits, and childhood trauma can be used to decrease the adverse effects of trauma and increase positive psychological symptoms in our patients.

Acknowledgments

We thank the honorable participants who have cooperated in implementing this research.

Conflict of Interest Disclosures

The author declares that they have no competing interests.

Funding Sources

Not applicable.

Authors' Contributions

All the authors contributed in designing, collecting, analyzing editing the final manuscript.

Ethical Statement

The ethical committee confirmed this study by code (IR.USWR.REC.1400.066).

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