



RESEARCH ARTICLE / ARAŞTIRMA YAZISI

# Examination of the Relationship between Post-Traumatic Growth and Perceived Social Support During the COVID-19 Pandemic

## COVID-19 Pandemi Sürecinde Algılanan Sosyal Destek ile Travma Sonrası Büyüme Arasındaki İlişkinin İncelenmesi

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### Abstract:

Severe concerns about catching a disease during the COVID-19 epidemic and the loss of relatives due to coronavirus can traumatize individuals. However, psychologically traumatizing experiences do not always lead to negative psychological consequences. Post-traumatic growth indicates the positive shifts that appear due to the coping methods that individuals exhibit while struggling with traumatic experiences. Perceived social support is thought to play an essential role in growth after traumatic experiences. The purpose of this research is to investigate the relationship between the grade of social support perceived by young adults and the level of post-traumatic growth throughout the COVID-19 epidemic term. The sample of the investigation consists of 467 (325 female, 69.6% female, 142 male, 30.4% male) young adult individuals between the ages of 18-35. The study data were analyzed using the Statistical Package for the Social Sciences (SPSS) 25.00 Program. In data analysis, Pearson Correlation Test and Multiple Linear Regression Analysis were applied. In the study, it was detected that the level of post-traumatic growth enhanced as the perceived social support level of young adult individuals increased during the COVID-19 pandemic days. It has seen that social support from family and special persons predicts post traumatic growth.

**Keywords:** COVID-19 Pandemic, Mass Trauma, Post-Traumatic Growth, Perceived Social Support

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**Öz:**

COVID-19 salgın sürecinde hastalık kapmakla ilintili şiddetli kaygılar ve koronavirüs sebebiyle bireylerin yakınlarını kaybetmeleri insanlar üzerinde travmatik bir etki yaratabilmektedir. Ancak psikolojik anlamda travmatize edici yaşantılar her zaman negatif psikolojik sonuçlar doğurmamaktadır. Travma sonrası büyüme kavramı, bireylerin örseleyici yaşantılar ile mücadele ederken sergiledikleri baş etme yöntemleri sonucunda açığa çıkan olumlu değişimleri ifade etmektedir. Travmatik yaşantıların ardından büyümenin gerçekleşmesi algılanan sosyal desteğin önemli bir rolü olduğu düşünülmektedir. Bu araştırmanın amacı, COVID-19 salgın döneminde genç yetişkin bireylerin algıladıkları sosyal destek düzeyi ile travma sonrası büyüme düzeyi arasındaki ilişkiyi incelemektir. Araştırmanın örneklemini 18-35 yaş aralığında bulunan toplam 467 (325 kadın, %69.6'sı kadın, 142 erkek, %30.4'ü erkek) genç yetişkin birey oluşturmaktadır. Çalışmanın verileri Sosyal Bilimler için İstatistik (SPSS) 25.00 Programı kullanılarak analiz edilmiştir. Veri analizinde Pearson Korelasyon Testi ve Çoklu Doğrusal Regresyon Analizi uygulanmıştır. Araştırmada COVID-19 pandemi sürecinde genç yetişkin bireylerin algıladıkları sosyal destek düzeyi arttıkça travma sonrası büyüme düzeyinin arttığı belirlenmiştir. Aile ve özel kişiden elde edilen sosyal desteğin travma sonrası büyümeyi yordadığı görülmüştür.

**Anahtar Kelimeler:** COVID-19 Pandemisi, Kitlel Travma, Travma Sonrası Büyüme, Algılanan Sosyal Destek

**Introduction**

Post-traumatic growth (PTG) points out the favorable psychological transformation that occurs afterward in severe distressing life events. Growth can manifest itself in different areas of an individual's life. The areas where individuals experience positive changes in their life; are change of priorities, enrichment in existential and belief areas, appreciating of the value of life, establishing more meaningful relationships with people, and increasing personal power (Tedeschi & Calhoun, 2004). Post-traumatic growth manifests itself with an increase in the individual's functionality level after a challenging life event such as cancer, war, accident, or illness (Linley & Joseph, 2004).

Perceived social support (PSS) is an individual's social and psychological support from the surrounding environment. It enhances the individual's resilience against trauma (Sippel vd., 2015). Supportive people can offer different perspectives to the individual about the traumatic event and change his point of view. With these different perspectives, vision changes that can lead to post-traumatic growth can be experienced (Tedeschi & Calhoun, 2004). Perceived social support brings experiences related to post-traumatic growth, such as compassion, tolerance, and a sense of belonging (Dursun & Söylemez, 2020). When a person tells about his or her traumatic life to supportive people, he expresses his feelings and strengthens the bonds with his relatives (Tedeschi & Calhoun, 2004). Many cancer patients state that their attitudes towards themselves and others changed positively after being diagnosed with cancer and receiving more family support. They are more grateful and develop a new philosophy about life (Schaefer & Moos, 1998).

As a result of social interaction-based coping methods exhibited during the coronavirus pandemic process, post-traumatic growth may occur (Olson, Shanafelt & Southwick, 2020). Individuals who received social support from their relatives during the COVID-19 epidemic process established deep bonds with the people around them, were able to cope better with their virus-related anxieties, and experienced post-traumatic growth (Sun et al., 2021). Similarly, in a study conducted in Turkey during the COVID-19 pandemic process, it was found that

perceived social support from the family reduced the stress level of individuals (Özer et al., 2020).

It has been determined that young adults who feel alone during the COVID-19 epidemic process have a higher tendency to make negative evaluations of the epidemic (Arslan et al., 2022). Individuals with high levels of loneliness during the pandemic process also have high levels of depression and anxiety (Laham et al., 2021). In the COVID-19 epidemic, individuals with low perceived social support experience more psychological difficulties and feel higher levels of anger compared to individuals who report high levels of perceived social support (Murphy et al., 2022). Low grades of perceived social support during the epidemic are associated with low grades of resilience and quality of life. Besides, insufficient perceived social support was discovered to be linked with high levels of fear associated with COVID-19 (Yalçın, Can, Mançe-Çalışır & Çolak, 2022). However, it is thought that supporting the individual in the face of negativities that he can cope with on his own will prevent him from re-determining his mental power limits to expand his mental power and negatively affect post-traumatic growth.

It can be said that close interpersonal relations are dominant in Turkish culture in general. Individuals are closely tied to their families, relatives, and close neighbors (Ercan, 2013). Therefore, when the individual is faced with trauma, it is thought that in Turkish Society, social support systems come into play so strongly, and it helps to develop post-traumatic growth. It is thought that the supportive capacity of close relationships, which constitute the limited social interaction area that people can access, come to the fore even more during the covid-19 pandemic period, which is a period when individuals cannot go to work and public spaces or can be in these areas with strict restrictions to prevent contact. Therefore the primary goal of this investigation is to understand the association between the grade of perceived social support in the coronavirus epidemic process and the grade of post-traumatic growth in Turkish population.

## Methods

A relational screening model was used in the research. The results of the survey were coded and transferred to the computer environment. The coded data were analyzed in SPSS 25.00 program.

### Participants

The population of the research consists of young adult persons between the ages of 18-35 living in Turkey in 2021. The sample of the research includes 325 female (69.6%) and 142 male (30.4%) young adult individuals between the ages of 18-35 residing in Turkey who accepted to attend the research voluntarily in 2021. 69.6% of the participants were female, 30.4% male, 18.8% secondary education, 12% high school, 57.6% undergraduate, 11.6% postgraduate, 13%, 9 married, 86.1% single, 67% unemployed, 33% working, 27.4% diagnosed with COVID-19, 72.6% not receiving, 3.4% required hospitalization due to COVID-19, 96.6% were not hospitalized, 51.8% first-degree relatives were diagnosed with COVID-19, 48.2% were not, 14.6% were first-degree relatives were hospitalized due to COVID-19, 85.4% were not hospitalized, 10.9% lost a relative on account of COVID-19, 89.1% did not lose a relative. The average age of the participants ( $\bar{X}=24$ ,  $SD=4$ ), minimum age 18, maximum age 35. The average income of the participants ( $\bar{X}=4813$ ,  $SD=2958$ ), the minimum income is 800 TL, and the maximum income is 15.000 TL.

### Scales

Sociodemographic information form, Post-traumatic Growth Inventory (PTGI), The Multidimensional Scale of Perceived Social Support (MSPSS), and Multidimensional COVID-19 Scale were used as data collection tools in the investigation.

### Sociodemographic information form

The sociodemographic information form was composed by the researchers. In the form, there are questions about participants' age, gender, marital status, education level, employment status, and monthly income. Questions related to COVID-19 include whether the individual has been diagnosed with COVID-19, whether he has been hospitalized due to COVID-19, whether the first-degree relative has been diagnosed with COVID-19 and hospitalization, and whether the individual has lost a first-degree relative due to COVID-19.

### Post-traumatic Growth Inventory (PTGI)

Developed by Tedeschi and Calhoun (1996), PTGI assesses the affirmative consequences practiced by an individual after a psychologically traumatizing event. There are 21 items (Tedeschi & Calhoun, 2004), and the inventory is answered in a 6-point Likert format (Tedeschi & Calhoun, 1996). The adjustment of the measure to Turkish was implemented by Kağan, Güleç, Boysan, and Çavuş (2012). Getting a high point means that an individual has experienced a high grade of post-traumatic growth (Tedeschi & Calhoun, 1996). The Cronbach Alpha value determined in the reliability and validity study in Turkey is .92 for the total score, .88 for the alteration in self-perception, .77 for the shift in the relationships with others, and .78 for the modification in the philosophy of life (Kağan et al., 2012). In this research, the Cronbach Alpha value was determined to be .93 for the total score.

### The Multidimensional Scale of Perceived Social Support (MSPSS)

In MSPSS, developed by Zimet, Dahlem, Zimet, and Farley (1988), social support from family, friends, and a special individual is subjectively evaluated by the individual. There are 12 questions in total in the questionnaire, and the answers are evaluated in a 7-point Likert type. A high point on the questionnaire demonstrates an elevated level of perceived social support. The Turkish alteration of the scale was executed by Eker, Arkar, and Yıldız (2001). The internal consistency coefficient of the inventory was .89 for the total score, .85 for the family sub-factor, .88 for the friend sub-element, and .92 for the special person sub-component. Within the scope of this study, the Cronbach Alpha value was discovered to be .89 for the total score.

### Multidimensional COVID-19 Scale (MDCS)

Multidimensional COVID-19 Scale, constituted by Durak-Batıgün and Şenkal-Ertürk (2020), contains the measures taken for the emotions, thoughts, behaviors, and precautions linked to COVID-19. 'Feelings and behaviors related to COVID-19' sub-factor includes feelings such as anxiety, anger, and sadness about the virus and the individual's frequency of watching the news about the epidemic. The "precautions taken for COVID-19" sub-factor evaluates the individual's level of compliance with measures such as handwashing frequency, wearing a mask, and social distancing. There are 22 items in the inventory. The answers to the inventory are in a 5-point Likert format. An elevated score on the scale means that the person suffers from negative feelings such as anxiety and anger linked to COVID-19, the epidemic. It means that he thinks the disease is severe and has significant effects on his life and takes a high level of precautions to avoid catching the virus. The Cronbach Alpha value of the Multidimensional COVID-19 Scale is .90 for the total score, the internal consistency coefficient of the COVID-19-related emotions and behaviors sub-dimension is .88, the internal consistency coefficient of the COVID-19-related thoughts sub-factor and the internal consistency coefficient of the measures taken against COVID-19 is .77 and .75. This study's Cronbach Alpha value was determined to be .91 for the total score.

### Data Collection

At the outset of the data-gathering phase, the investigation was confirmed by the İstanbul Aydın University's Graduate Education Institute Ethics Committee (decision no: 2021/10, date: 01.10.2021). Before data collection, permission was obtained from scales' developers or researchers who adapted the scales into Turkish for each scale used in the research. Data were gathered through both pen and paper methods and online surveys (Google Forms). Individuals between the ages of 18-35 and a total of 325 female (69.6%) and 142 male (30.4%) young adult individuals were reached by practicing the snowball sampling method. In the consent form sent to the participants, there is a warning which indicates participants can quit the examination at any time and that the confidentiality of the information they have stated in the study will be protected by researchers. Participants were incorporated into the research after signing the consent form voluntarily.

**Results**

**Table 1.** Relationship between the Post-traumatic Growth Inventory, The Multidimensional Scale of Perceived Social Support and the Multidimensional COVID-19 Scale

	1	2	3	4	5	6	7	8	9	10	11	12
1-Post-traumatic Growth Inventory	1											
2-Changes in Self-Perception	.949**	1										
3-Changes in Philosophy of Life	.871**	.747**	1									
4-Changes in Relationship with Others	.832**	.699**	.596**	1								
5-The Multidimensional Scale of Perceived Social Support	.401**	.404**	.297**	.351**	1							
6-Family	.373**	.358**	.267**	.369**	.894**	1						
7-Friend	.349**	.351**	.246**	.321**	.940**	.785**	1					
8-Special Person	.370**	.390**	.298**	.263**	.876**	.642**	.748**	1				
9-Multidimensional COVID-19 Scale	.203**	.230**	-.113*	.172**	.218**	.207**	.150**	.241**	1			
10-Thoughts about COVID-19	.210**	.223**	.147**	.174**	.221**	.211**	.159**	.236**	.838**	1		
11-Precautions taken related to COVID-19	.196**	.237**	-.101*	.151**	.201**	.188**	.132**	.232**	.804**	.526**	1	
12-Feelings and behaviors related to COVID-19	.147**	.168**	-.070	.136**	.167**	.160**	-.114*	.184**	.939**	.690**	.645**	1

\*p<0.05 Test used: Pearson Correlation Analysis.

The relationship between the Post-Traumatic Growth Scale, the Multidimensional Scale of Perceived Social Support, and the Multidimensional COVID-19 Scale was examined using Pearson Correlation analysis. There is a moderate and positive correlation between The Multidimensional Scale of Perceived Social Support and the Post-traumatic Growth Inventory (r=.401, p<0.01).

Also, there is a low and negative relationship between the Multidimensional COVID-19 Scale and The Multidimensional Scale of Perceived Social Support (r=-.218, p<0.01) variables, a low-level and negative relationship between the Multidimensional COVID-19 Scale and the Post-traumatic Growth Inventory (r=-.203, p<0.01). The findings regarding the relationship between the scales are given in Table 1.

**Table 2.** Prediction of The Multidimensional Scale of Perceived Social Support scores on Post-traumatic Growth Inventory scores

	B	SH	β	t	p
(Constant)	39.40	3.62		10.87	0.000*
Family	1.09	0.26	0.23	4.18	0.000*
Special Person	1.07	0.27	0.22	4.01	0.000*

R=.41 R<sup>2</sup>=.16 F=46.82 p=0.000\*

\*p<0.05 Test used: Stepping Method: Multiple Linear Regression Analysis

Multiple linear regression analysis was performed for the predictive role of the scale of Perceived Social Support on The Scale of Posttraumatic Growth. It was determined, according to the findings, that family and special person sub-scale scores predicted post-traumatic growth scores significantly (R=.41, R<sup>2</sup>=.16, p<0.05). It was determined that the independent variables in the obtained regression model accounted for 16% of the change in post-traumatic

growth. Relative order of effect according to beta; family (β=.23), the special person (β=.22). It was observed that the effect of family and special person sub-scales was positive. It was determined that the variable that best explained the change in growth after trauma was the family sub-scale. Table 2 presents findings on The Multidimensional Scale of Perceived Social Support scores to predict Post-traumatic Growth Scale scores.

**Table 3.** Comparison of scores obtained from the Post-Traumatic Growth Inventory, Multidimensional Scale of Perceived Social Support, and Multidimensional COVID-19 Scale according to the loss of a relative due to COVID-19

		n	X̄	Sd.	t	df.	p
Post-Traumatic Growth Inventory	HL	51	73.12	15.09	-0.34	465	0.732
	NL	416	73.93	16.12			
Changes in Self-Perception	HL	51	35.55	8.18	-0.41	465	0.680
	NL	416	36.05	8.20			
Changes in Philosophy of Life	HL	51	21.92	4.62	-0.05	465	0.958
	NL	416	21.96	5.19			
Changes in Relationships with Others	HL	51	15.65	4.03	-0.40	465	0.687
	NL	416	15.92	4.58			

The Multidimensional Scale of Perceived Social Support	HL	51	47.78	8.90	0.40	465	0.692
	NL	416	47.22	9.59			
Family	HL	51	16.24	3.06	0.54	465	0.590
	NL	416	15.96	3.43			
Friends	HL	51	15.49	3.49	0.24	465	0.812
	NL	416	15.36	3.85			
Special Person	HL	51	16.06	3.30	0.31	465	0.753
	NL	416	15.90	3.32			
Multidimensional COVID-19 Scale	HL	51	65.45	10.00	4.87	83.342	0.000*
	NL	416	57.69	15.59			
Thoughts about COVID-19	HL	51	20.69	4.37	3.16	465	0.002*
	NL	416	18.44	4.85			
Precautions taken related to COVID-19	HL	51	14.80	3.72	3.36	465	0.001*
	NL	416	12.58	4.55			
Feelings and behaviors related to COVID-19	HL	51	29.96	5.00	4.07	88.377	0.000*
	NL	416	26.67	8.31			

\*p<0.05 Test used: Independent Samples T-Test.

\*HL: has a loss

NL: No-loss

Independent Samples T-Test was performed for the relationship between losing a relative and The Multidimensional Scale of Perceived Social Support, The Scale of Posttraumatic Growth, and the Multidimensional COVID-19 Scale. Post-Traumatic Growth Inventory and The Multidimensional Scale of Perceived Social Support were compared over the variable of losing a relative due to COVID-19, and it was found that there was no significant difference between the average scores obtained from the scales ( $p>0.05$ ). When the scores obtained from the Multidimensional COVID-19 Scale ( $t(83.342)=4.87$ ,  $p<0.05$ ) were compared over the variable of losing a relative due to COVID-19 of the first-degree relative, it was determined that there was a significant difference between the average scores obtained from the scales. When the averages are compared, it is seen that those who lost a relative have a higher average than those who did not. Findings regarding the loss of a relative due to COVID-19 are given in Table 3.

## Discussion

This study identified that as the perceived social support level of young adult individuals increased, the level of post-traumatic growth increased, too, like in lots of studies (Ajoudani, Jafarizadeh & Kazamzadeh, 2019; Kong et al., 2018). Trauma is a state of intense inadequacy and helplessness in which an individual experiences his/her loneliness (Arnetz, Goetz, Arnetz & Arble, 2020). However, social support prevents the individual from experiencing loneliness and helplessness (Pehlivan, Ovayolu, Ovayolu, Sevinç & Camcı, 2012). Besides, while the individual is telling the traumatic situation/event to his relatives, he experiences the traumatic event at a certain level, which makes him think about the challenging experience consciously and activates the reprocessing (Zebrack et al., 2015). As a result of the conscious re-evaluation of the traumatic event with social support, post-traumatic growth may occur. In addition, the current research found that perceived social support level

predicted post-traumatic growth. The conclusion of the research is in parallel with the investigations in the literature (Rime, Paez, Basabe & Martinez, 2010; Zhang, Ma, Wang, Wang & Jiang, 2021). It is thought that the individual who shares the challenging event with the people around him during the COVID-19 pandemic may reprocess his feelings, thoughts, and memories related to the traumatic experience, and as a result, he may experience post-traumatic growth.

The findings of this examination indicate that perceived social support, especially family and special one based social support, has a crucial role in the post-traumatic growth of young adults during the COVID-19 days. But at the same time current study shows, a more secondary social environment, such as friends, is not predictive for post-traumatic growth. It is thought that this situation is caused by the necessity of social isolation created by the covid-19 pandemic, the distance of individuals from their friends, and the negative effects of friendship relations from this distance (Yılmaz & İnce, 2020).

Post-traumatic growth can be thought of as depending on the severity of the trauma and the weakness of precautions to not get harmed from it and also depending on the individual's experience of the trauma tragically and living in deep isolation and inadequacy. Since Turkish culture has a collectivist nature (Tagay, Voltan-Acar & Nalbant, 2016), it is thought that when becoming face to face with a traumatic experience, Turkish people continue to evaluate themselves not completely independently from other people who are surrounding them so they don't feel all alone in front of COVID-19 pandemic's threats but within the existing social support systems so they cannot produce higher degrees of PTG. Similarly, the finding of the current study also indicated that young adult individuals who reported high levels of negative emotions and thoughts related to COVID-19 and took precautions against the virus experienced low levels of post-traumatic growth. As it is seen taking so many precautions plays a

preventing role in traumatization and post traumatic growth. Since the increase in social support will reduce the feelings of loneliness and helplessness, it is expected to reduce the traumatic nature of the trauma and, therefore decrease the post-traumatic growth. Similarly, Billette, Guay, and Marchand (2008) emphasize that perceived social support has a preventive or protective influence on people when they are under individual stress and traumatic effects. As a result of perceived social support, the post-traumatic growth rate decreases in relation to the low level of traumatic stress (Tedeschi & Calhoun, 2004). Conversely, under direct stress and trauma, people deprived of social support experience trauma (traumatic tragedy) more severely, more widely, and severely (Gaffey et al., 2018).

But at the same time when the individual becomes face to face with severe trauma but no social support at all, it could damage the ability for post-traumatic growth. In a study carried out with young adults throughout the COVID-19 epidemic, it was discovered that low perceived social support was related to elevated levels of anxiety (Guo et al., 2021). In this study, young adults who feel high levels of anxiety, fear, sadness, and anger about COVID-19, who frequently check for signs of illness, and who take high levels of social distancing and hygiene measures to avoid catching coronavirus reported low levels of perceived social support. The result of the examination is coherent with the studies in the literature (Ao et al., 2020; Karimi, Makvandi, Mavdavian & Khalili, 2021). When an individual loses his loved one, most of the time he also loses a crucial part of his social support system. The feelings of fear and uncertainty may increase in individuals who have lost their loved ones due to the coronavirus (Usher, Durkin, & Bhullar, 2020). In the current study, it was observed that young adults who lost their first-degree relatives due to COVID-19 had higher levels of emotions, behaviors, and thoughts about COVID-19 but there wasn't any significant difference in their PTG level and perceived social support.

It is thought that the study findings will shed light on intervention studies and clinical applications that aim to increase the post-traumatic growth grade of individuals

throughout the COVID-19 epidemic process. Findings of the research; the sociodemographic information form is limited to the information obtained using the Multidimensional COVID-19 Scale, Post-traumatic Growth Inventory, and The Multidimensional Scale of Perceived Social Support and the methods used in statistical analysis. Because the measurement tools used are based on self-report. It was accepted that the participants evaluated the questions sincerely. It is recommended to actualize a longitudinal design in forthcoming studies. In this way, the presence or level of post-traumatic growth can be evaluated more clearly by determining how the individual copes with the stressors or traumatic situations that he or she will encounter in the future. Since social support is a traditional value in Turkish Society and tends to be high in general, it is thought that it can show an inhibitory effect to some degree. So it is recommended that other researchers investigate the participants' relationship quality more deeply.

#### Declarations

##### Ethics Approval and Consent to Participate

Ethics Approval for this research was acquired from İstanbul Aydın University's Graduate Education Institute Ethics Committee on the date of 01/10/2021 (decision no: 2021/10). Young adults have read and confirmed informed consent before participation.

##### Consent for Publication

Not applicable

##### Availability of Data and Materials

Not applicable.

##### Competing Interests

The author declares that no competing interests in this manuscript.

##### Funding

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##### Authors' Contributions

DK and HF contributed equally to outreach, data collection, literature review, statistical analysis, and article writing.

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