GÜSBD 2024; 13(2): 561 - 570 | **Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi** | **Araştırma Makalesi**
GUJHS 2024; 13(2): 561 - 570 | Gümüşhane University Journal of Health Sciences | Original Article

The Relationships Between Posttraumatic Growth and Psychological Resilience in Individuals with Chronic Disease

Kronik Hastalığı Olan Bireylerde Posttravmatik Büyüme ile Psikolojik Sağlamlık Arasındaki İlişki

Mehmet Emin ŞANLI[1]

ABSTRACT

The aim of this study is to investigate the relationships between posttraumatic growth and psychological resilience in individuals with a chronic disease. This study is of descriptive-relational type. The study was carried out in a training and research hospital between October and December 2022. In total, 875 people, 490 of whom were women (56.0%) and 385 of whom were men (44.0%), older than 18 years old, participated in the study. Descriptive Features Form (DSF), Post-trauma Growth Scale (PTGS) and Brief Psychological Resilience Scale (BPRS) were used in the study. According to correlation analyses, a statistically weak positive significant relation was found between total PTGS score and total BPRS scores (r=0. 124**, p<0.005). A statistically significant and positive correlation was found between the participants' PTGS sub-dimensions of positive change in self-perception, recognizing new possibilities and valuing life scales and BPRS total score (respectively; r=0.157**, r=0.169**, r= 0.110**; p<0.005). In the study, it was determined that there is a positive relationship between post-traumatic growth and resilience. It can be said that resilience is an important parameter in post-traumatic growth. It is predicted that the results of the research conducted with such a large sample will be a source for new researches on the importance of psychological resilience in the lives of individuals.

Keywords: Chronic disease, Posttraumatic growth, Psychological resilience

ÖZ

Bu çalışmanın amacı, kronik hastalığı olan bireylerde travma sonrası büyüme ile psikolojik sağlamlık arasındaki ilişkiyi araştırmaktır. Bu çalışma betimsel-ilişkisel tiptedir. Çalışma Ekim-Aralık 2022 tarihleri arasında bir eğitim ve araştırma hastanesinde gerçekleştirildi. Çalışmaya 18 yaşından büyük 490 kadın (%56,0) ve 385 erkek olmak üzere (%44,0) toplam 875 kişi katıldı. Araştırmada Tanıtıcı Özellikler Formu (TÖF), Travma Sonrası Büyüme Ölçeği (TSBÖ) ve Kısa Psikolojik Sağlamlık Ölçeği (KPSÖ) kullanıldı. Korelasyon analizinin sonuçlarına göre, TSBÖ toplam puanı ile KPSÖ toplam puanı arasında istatistiksel olarak anlamlı pozitif yönlü zayıf bir ilişki olduğu saptandı (r=0, 124**, p<0,005). Katılımcıların TSBÖ alt boyutlarından kendilik algısında olumlu değişim, yeni olanakların fark edilmesi ve hayata değer verme ölçekleri ile KPSÖ toplam puanı arasında istatistiksel olarak anlamlı pozitif yönlü zayıf bir ilişki saptandı (sırasıyla; r=0,157**, r=0,169**, r=0,110**; p<0,005). Sonuç olarak, araştırmada travma sonrası büyüme ile psikolojik sağlamlık arasında pozitif bir ilişki olduğu tespit edildi. Psikolojik sağlamlığın, travma sonrası büyümede önemli bir parametre olduğu söylenebilir. Geniş bir örneklem ile yapılan araştırma sonuçlarının, psikolojik sağlamlığın bireylerin hayatındaki önemine ilişkin yeni araştırmalara kaynaklık edeceği öngörülmektedir.

Anahtar kelimeler: Psikolojik sağlamlık, Kronik hastalık, Travma sonrası büyüme

Before starting the research, approval from the Ethics Committee of Health Sciences Non-Interventional Clinical Research of (2022/08-05) and permission from the related institution, where the research was conducted, (E-47960527-771) were obtained.

[1]Dr. Öğretim Üyesi, Mehmet Emin ŞANLI, Psychiatric Nursing, Batman University, Vocational Higher School of Health Services, Department of Medical Services and Techniques, PhD, RN, Batman, Turkey, m.emin---4747@hotmail.com, ORCID: 0000-0002-5515-2752

İletişim / Corresponding Author: Mehmet Emin ŞANLI
e-posta/e-mail: m.emin---4747@hotmail.com

Geliş Tarihi / Received: 04.07.2023
Kabul Tarihi/Accepted: 09.11.2023

INTRODUCTION

Chronic diseases consist of the diseases that threat the lives of individuals, and generally necessitate more than one-year treatment, and cause the individual to lose great deal of work force, and lead to many complications and affect almost individuals of all age groups.[1,2] For many individuals, it is perceived that suffering from a chronic disease is a threatening situation and these changes can cause individuals to experience adaptation problems, traumatic and psychological problems.[1,2,3]

Many drugs and treatment methods used in the treatment of chronic diseases significantly affect the quality of life of patients, sometimes positively and sometimes negatively. The drugs taken for the treatment of chronic diseases such as kidney failure, cancer and diabetics, and treatment applications create significant changes in the lives of the patients, so the patients may become addicted to machines, family, institutions or health staff.[3] Patients who are subjected to heavy medication use and treatment practices that are difficult to cope with, cause great pain, are exposed to changes that may cause physical and mental diseases in addition to the benefits of medications and practices. However, it has been shown that traumatic situations that occur due to stress do not always have negative effects on people's mental health; on the contrary, sometimes traumatic experiences can even lead to positive emotional states and post-traumatic growth.[4,5] Therefore, traumas do not always have negative consequences; they can also have positive consequences, such as what does not kill me makes me stronger.

After the trauma, the positive developments occurring in individuals are defined as perceived benefit, stress and post trauma connected growth. Post-trauma generally shows itself as a permanent positive psychological change occurring in an individual as a result of stress, trauma or challenging living conditions.[6] Traumatic events affect many individuals; nevertheless, only some individuals experience the positive effects of trauma. It is determined that individuals who are positively affected by trauma have effective coping strategies, social support and spiritual perception.[1] For this, we can contribute to posttraumatic growth with the right supporting methods.

Psychological resilience state is the ability of individuals to successfully cope with and adapt to the difficulties. It has been determined that the level of resilience of an individual has a certain effect on the positive psychological state of the individual.[7-9] If a person is strong in terms of psychological resilience, this increases the personal power of the individual to cope with chronic diseases, and helps them to understand the value of their lives and find new meanings, contribute them to be spiritually well, and enable them to re-evaluate their priorities in life.[10] Within this context, it can be said that psychological resilience is effective for individuals in combating with the chronic diseases.

In a study conducted on different people, it was determined that there was a positive relationship between post-traumatic growth and psychological resilience.[4] Thanks to the experiences of psychological resilience, it was determined that individuals with chronic diseases give a new meaning to life, improve their interpersonal interactions by supporting posttraumatic growth, increase their levels of coping with stress, and deepen their spiritual experiences.[4,5] It can be said that there is an intertwined and complementary relationship between posttraumatic growth and psychological resilience, since individuals, who have gone through a severe process such as chronic disease, become stronger and recover from the disease faster, by increasing their psychological resilience.[9,10] Gao et al. found that psychological resilience could reduce the psychological distress and stress of individuals with chronic diseases, and provide posttraumatic growth for individuals with chronic diseases.[11]

Patients may be affected by the changes in their lives with the traumas they have experienced, and by many psychological and physical factors while trying to learn to live with these traumas. Nurses are important health professionals who interact directly with patients and provide care for patients with a holistic approach during the traumatic process, support patients' strengths and help them grow after trauma, and support them to cope with difficult life events they may encounter. Traumas experienced by individuals with chronic diseases can negatively affect their life quality. However, with the support of nurses, patients can overcome the physical and psychological problems associated with the new lifestyle. Therefore, nursing care focuses on attitudes and reactions that will positively affect patients' quality of life.[12]

In the literature, no study examining the relationship between posttraumatic growth and psychological resilience in individuals with chronic disease was found by the researcher. It is thought that determining the relationship between posttraumatic growth and psychological resilience of individuals with chronic diseases and making interventions for this will positively contribute to increasing the compliance with treatment of individuals having chronic diseases. In this context, this study will seek answers to the following questions:

-What is the posttraumatic growth level of individuals with chronic diseases?

- What is the psychological resilience of individuals with chronic diseases?

- Is there a relationship between post-traumatic growth and psychological resilience of individuals with chronic diseases?

MATERIAL AND METHOD

Type of Study

This study was conducted as a descriptive-relational study to determine the relationship between posttraumatic growth and resilience in individuals with chronic diseases.

Sampling Procedure

Those who wanted to participate, were over the age of 18, were able to communicate, and were diagnosed with chronic diseases were included in the study. All patients diagnosed with any psychiatric disorder such as dementia, organic mental disorder, neurological disease, or mental disability were excluded from the study.

The population of the research consists of patients hospitalized in the clinics of a training and research hospital between October and December 2022 and individuals with any chronic disease who applied to the outpatient clinics. With the power analysis performed, the sample size was determined as 327 people, with a 95% confidence interval, an effect size of 0.06, and a power of 0.95 to represent the universe. However, in order to strengthen the study further and increase its specificity, all patients who accepted to participate in the study and who met the research criteria were tried to be reached. As a result of these efforts, the study was completed with 875 patients with chronic diseases.

Data Collection Tools

Descriptive Features Form (DSF): This form, prepared by the researcher, consists of 9 questions: age, gender, marital status, educational status, income level, employment status, family history of chronic disease, smoking and duration of chronic disease.

Post Trauma Growth Scale (PTGS): The Cronbach alpha value of this scale, which was developed by Tedeschi and Calhoun,[13] was found to be 0.90. Kağan et al.[14] performed the Turkish validity and reliability study of the scale, and Cronbach's alpha value was found to be 0.83. PTGS consists of 21 items and is 6-point Likert 0 (I did not experience this change) and 5 (I experienced this change extensively). For example; I am more compassionate towards other people. The score that can be obtained from the scale

is between 0-105. High scores obtained from the scale indicate that the person shows a high level of posttraumatic growth and development after a traumatic experience.[14] Sub-dimensions of the scale: "positive change in self-perception (4, 10, 12, 19.), positive change in relationships with others (6, 8, 9, 15, 16, 20, 21.), realization of new possibilities (3, 7, 11, 14, 17.), change in belief system (5, 18.), and valuing life (1, 2, 3.). In this study, the Cronbach's alpha value of PTGS was found to be 0.92.

Brief Resilience Scale (BPRS): This scale, which was adapted to Turkish by Doğan,[15] was developed by Smith et al.[16] This scale is a 5-point Likert-type measurement tool, consisting of three positive and three negative items, in the form of "Not at all appropriate" (1) and "Completely appropriate" (5). For example; It takes me a long time to get rid of the effects of negativity in my life. The internal consistency coefficient calculated for the reliability of BPRS was found to be 0.83. High scores obtained from the scale indicate a high level of psychological resilience of individuals. In this study, the Cronbach's alpha value of BPRS was found to be 0.62. It is thought that the low alpha value of the study is due to the socio-demographic characteristics of the participants in the region where the data were collected.

Data Collection

Data were collected from patients, who came to a training and research hospital, by the researcher between October and December 2022. The researcher applied data collection forms according to the appropriate conditions of the patients. Filling in the data tools took an average of 5-10 minutes. The researcher explained the unclear questions to the patients without commenting.

Analysis of Data

In the analysis of the data, $p<0.05$ was considered to be significant for the research. Cronbach's α coefficient was used in the internal consistency analysis of the scales. F= One Way ANOVA, t: independent sample test, Tukey test (Post Hoc Analysis) and Pearson correlation analysis for the relationship between the scales were used to determine the descriptive features, percentile distribution, determination of the total mean score of the scales, arithmetic mean, comparison of the scales. All analyses were performed using Windows SPSS version 26 statistical software.

Ethical Aspect of Study

Before starting the research, approval from the Ethics Committee of Health Sciences Non-Interventional Clinical Research of (2022/08-05) and permission from the related institution, where the research was conducted, (E-47960527-771) were obtained. The purpose of the study was explained to the patients and they were informed about the fact that their information would be kept confidential and they could leave the study at any time. The research was conducted in accordance with Helsinki Declaration Principles. In addition, verbal and written consents were obtained from the patients using the 'Informed Voluntary Consent Form'.

Limitations of the Research

This study has some limitations. First, the participants are limited to patients with any kinds of chronic diseases who apply to a training and research hospital in a city in eastern Turkey. Therefore, the generalizability of the results is limited. The sample size should be increased and expanded with more individuals with chronic diseases. Second, since this study used relational data, the results cannot be used to understand causal relationships.

FINDINGS AND DISCUSSION

Table 1. Sociodemographic Properties of Participants

	Number	Percent
Gender		
Woman	490	56.0
Man	385	44.0
Age		
18-28 years old	310	35.4
29-39 years old	152	17.4
40-50 years old	236	27.0
51 years old and over	177	20.2
Marital Status		
Married	486	55.5
Divorced or alone	389	44.5
Education Status		
Literate	157	17.9
Primary	150	17.1
Secondary	110	12.6
High School	150	17.1
University and higher	308	35.2
Income Status		
Low	173	19.8
Medium	602	68.8
High	100	11.4
Employment Status		
Employed	305	34.9
Unemployed	570	65.1
Presence of a chronic disease in the family		
Yes	623	71.2
No	252	28.8
Smoking Status		
Yes	287	32.8
No	486	55.5
Quitted	102	11.7
Duration of chronic disease		
1-3 years	293	33.5
4-6 years	278	31.8
7 years and older	304	34.7
Total	875	100.0

In Table 1, when the sociodemographic properties of the participants are examined, it is seen that 56.0% of participants were women, 35.4% of participants were between the ages of 18-28, 55.5% of participants were married, 35.2% of participants were university or higher institution graduates, 68.8% of participants had medium income, 65.1% of participants were unemployed, 71.2% of participants had chronic disease in the family, 55.5% of participants were non-

smoker and 34.7% of participants had for 7 years and more chronic disease.

Table 2. Comparison of The Sociodemographic Characteristics of The Participants and Their Total Scores From The Posttraumatic Growth Scale and Psychological Resilience Scales

	PTGS	BPRS
	X± SS	X± SS
Gender		
Woman	51.94±20.53	17.71±3.91
Man	49.06±19.74	18.53±3.79
	t=2.090	t=-3.117
	p= 0.037	**p= 0.002**
Age		
18-28 years	50.71±21.69	17.85±3.96
29-39 years	49.36±19.34	18.30±3.75
40-50 years	51.33±19.09	18.32±3.83
51 years and older	50.86±19.90	17.92±3.93
	F=0.303	F=0.925
	p= 0.823	p= 0.428
Marital Status		
Married	51.58±19.83	18.25±3.73
Divorced or Alone	49.55±20.67	17.84±4.05
	t=1.475	t=1.554
	p= 0.140	p= 0.121
Education Status		
Literate	47.61±19.37	17.57±4.01
Primary	51.38±18.05	18.11±3.50
Secondary	50.20±17.17	18.05±3.18
High School	53.43±19.48	18.23±3.52
University and higher	50.72±22.76	18.23±4.35
	F=1.665	F=0.846
	p= 0.156	p= 0.496
Chronic Disease Duration		
1-3 years	49.23±21.97	18.15±3.77
4-6 years	50.14±18.57	18.28±3.64
7 years and more	52.56±19.84	17.80±4.19
	F=2.169	F=1.194
	p= 0.115	p= 0.303
Smoking Status		
Yes	48.79±20.86	18.16±3.93
No	51.98±20.00	18.02±3.90
Quitted	49.75±19.17	18.09±3.65
	F=2.361	F=0.119
	p= 0.095	p= 0.888
Employment Status		
Employed	52.78±21.71	18.67±3.72
Unemployed	49.55±19.31	17.75±3.93
	t=2.180	t=3.336
	p= 0.030	**p= 0.001**

Table 2. (Continued)		
Presence of Chronic Disease in Family		
Yes	51.38±19.89	17.88±3.89
No	48.92±20.96	18.54±3.82
	t=1.629	t=-2.298
	p= 0.104	**p= 0.022**

F= One Way ANOVA analysis., t: ındependent sample test, p<0.05, *Tukey Test (Post Hoc Analysis)

In Table 2, a statistically significant difference was found between PTGS and BPRS and participants' gender, employment status, and presence of chronic disease in the family (p<0.05). According to the results of Tukey test statistics, which was carried out to determine the source of the difference, the mean scores of women obtained from PTGS are higher than that of men, while the mean scores of men from BPRS are higher than that of women. The mean scores of the employed participants obtained from PTGS and BPRS are higher than the unemployed participants. The mean scores of those who do not have a family history of chronic disease in BPRS are higher than those with a family history of chronic disease.

Table 3. The Relationship Between the Participants' Posttraumatic Growth Scale Score and The Short Psychological Resilience Scale Score

Scales and sub-dimensions	**X± SS**						
PTGS Total Score	50.67 ±20.22						
Positive Change in Self-Perception	10.41 ±4.62	**856****					
Positive Change in Relationships with Others	15.54 ±7.33	**848****	**590****				
Recognizing New Possibilities	11.51 ±5.55	**893****	**746****	**668****			
Change in Belief System	5.92± 2.67	**710****	**633****	**515****	**562****		
Valuing Life	7.03± 3.48	**726****	**588****	**500****	**704****	**459****	
Psychological Resilience Total Score	18.07 ±3.88	**124****	**157****	034	**169****	018	**110****

Pearson correlation analysis, **p<0.005. *p<0.05

Participants' PTGS total score was 50.67±20.22, Positive Change in Self-Perception subscale total score was 10.41±4.62, Positive Change in Relationships with Others total score was 15.54±7.33, Recognizing New Opportunities subscale total score was 11.51±5.55, Change in Belief System subscale total score was 5.92±2.67, and the total score of the Valuing Life subscale was 7.03±3.48. The participants' total BPRS score was 18.07±3.88 (Table 3).

A statistically significant positive and weak correlation was found between the participants' PTGS total score and BPRS total score (r=0. 124**, p<0.005). A statistically significant and weak correlation was found between the participants' PTGS sub-dimensions, Positive Change in Self-Perception, Recognizing New Opportunities and Valuing Life, and the BPRS total score (r=0.157**, r=0.169**, r=0.110**; p<0.005, respectively) (Table 3).

The aim of this study was to investigate the relationships between posttraumatic growth and psychological resilience among individuals with several chronic diseases. At

the end of the research, it was seen that the research results generally supported the study questions.

In the result analyses performed to compare the sociodemographic characteristics of the participants with their total scores to PTG and BPR scales, it was determined that there was a statistically significant difference between the participants' gender, employment status, presence of chronic disease in the family, and the total scores they got from PTG and BPR scales. According to the statistical results conducted to determine the source of this difference, which was carried out to determine the source of this difference, it was determined that while the mean scores of women in PTGS were higher than that of men, the mean scores of men from BPRS were higher than those of women. When we look at the literature, we can see similar studies that support the results of our study that the average score of women in PTGS is higher than that of men. In a study conducted on university students who experienced the earthquake in Van, it was determined that posttraumatic growth and gender variables were significant predictors, and posttraumatic growth scores of mothers were higher than fathers.[17] Similarly, in other studies conducted on adults, posttraumatic growth scores of female participants were found to be significantly higher than the scores of male participants.[18,19] In a study conducted on people who have experienced traumatic events, it was stated that women showed more post-traumatic growth than men.[13] However, there are also studies in the literature with different results. Within this context, a study concluded that gender is not in a significant relationship with posttraumatic growth.[20] It is thought that the reason for encountering such different results in the findings in the literature may be due to the socio-demographic characteristics of the region where the study was conducted. In the current study, it was determined that the mean scores of men from BPRS were higher than that of women. When the literature is examined, studies supporting the results of the current study can be encountered. For example, in a study conducted on teacher candidates,[21] in an examination of the responses of individuals to the Covid -19 epidemic in terms of psychological resilience,[22] in a study that examined the relationship between gender and psychological resilience in individuals,[23] and in a study performed on patients with burns, similar results were obtained. In the study carried out by Masood et al. it was determined that the psychological resilience levels of male participants were significantly higher than female participants.[24] However, there are also studies in the literature that found different results. In a study conducted on university students, it was stated that the psychological resilience levels of the participants did not differ according to gender.[25] The reason for this different result is thought to be due to the socio-demographic characteristics of the participants. For example, it is thought that the average age of the participants, the fact that most of them are not married, and their high level of education may be effective in post-traumatic growth, while the high spirituality and religious values of the region where the study is conducted affect psychological resilience.

Results of the correlation analysis revealed a statistically significant positive correlation between the study variables, PTGS total score and BPRS total score. Consistent with these data, studies have reported that there is a positive correlation between posttraumatic growth and resilience.[26-28] In one of the studies, it was found that breast cancer patients showed moderate posttraumatic growth and that there was a positive relationship between psychological resilience and posttraumatic growth, and that psychological resilience mediated the positive effect of breast cancer patients on post-traumatic growth.[29] In a study on emergency room nurses, it is stated that resilience is the most effective predictor of posttraumatic growth.[30] Additionally, in studies conducted on hemodialysis and cancer patients, it has been stated that individuals with a high level of psychological resilience are stronger against diseases.[31,32]

These results show that resilience supports posttraumatic growth. In this context, life-threatening conditions such as chronic diseases, despite their negative and undesirable effects, can improve psychological recovery without leaving a traumatic effect, with appropriate treatment and appropriate support, and can contribute positively to people's lives by improving post-traumatic growth. The obtained results reveal the importance of psychological resilience; and it is thought that these results will be illuminating in understanding the mental health of individuals with chronic diseases.

CONCLUSION AND RECOMMENDATIONS

In the study, a statistically significant difference was found between PTGS and BPRS and participants' gender, employment status, and presence of chronic disease in the family.

A statistically significant positive and weak correlation was found between the participants' PTGS total score and BPRS total score. A statistically significant and weak correlation was found between the participants' PTGS sub-dimensions, Positive Change in Self-Perception, Recognizing New Opportunities and Valuing Life, and the BPRS total score.

It can be evaluated that psychological resilience plays an important role in overcoming the psychological problems that individuals have experienced due to their diseases by providing post-traumatic growth in individuals with chronic diseases. Increasing psychological resilience against trauma may be beneficial for the improvement of psychological disorders of individuals with chronic diseases. It is thought that the findings of the present study will be productive and provide contributing evidence for the development of interventions that increase the post-traumatic growth levels of individuals with chronic diseases by promoting increased resilience.

REFERENCES

1. Kömürcü, C. ve Kuzu, A. (2020). "Kronik Böbrek Hastalığında Travma Sonrası Büyüme". Nefroloji Hemşireliği Dergisi, 15(1), 30-36. Https://Doi.Org/10.47565/Ndthdt.2020.4
2. Tolleson, A. and Zeligman, M. (2019). "Creativity and Posttraumatic Growth İn Those İmpacted by A Chronic İllness/Disability". Journal of Creativity İn Mental Health, 14(4), 499-509. Https://Doi.Org/10.1080/15401383.2019.1632769
3. Singh, A.P, Biswas, A, Shukla, A. and Maiti, P. (2019). "Targeted Therapy İn Chronic Diseases Using Nanomaterial-Based Drug Delivery Vehicles". Signal Transduction and Targeted Therapy, 4(1), 33. Https://Doi.Org/10.1038/S41392-019-0068-3
4. Brooks, S, Amlot, R, Rubin, G.J. and Greenberg, N. (2020). "Psychological Resilience and Post-Traumatic Growth İn Disaster-Exposed Organisations: Overview of The Literature". BMJ Mil Health, 166(1), 52-56. Http://Dx.Doi.Org/10.1136/Jramc-2017-000876
5. Finstad, G.L, Giorgi, G, Lulli, L.G, Pandolfi, C, Foti, G, León-Perez, J.M. and Mucci, N. (2021). "Resilience, Coping Strategies and Posttraumatic Growth İn The Workplace Following COVID-19: A Narrative Review On the Positive Aspects of Trauma". International Journal of Environmental Research and Public Health, 18(18), 9453. Https://Doi.Org/10.3390/İjerph18189453
6. Jayawickreme, E, Infurna, F.J, Alajak, K, Blackie, L.E, Chopik, W.J, Chung, J.M. and Zonneveld, R. (2021). "Post-Traumatic Growth as Positive Personality Change: Challenges, Opportunities, And Recommendations". Journal of Personality, 89(1), 145-165. Https://Doi.Org/10.1111/Jopy.12591
7. Çiçek, I. (2021). "Mediating Role of Self-Esteem İn The Association Between Loneliness and Psychological and Subjective Well-Being İn University Students". International Journal of Contemporary Educational Research, 8(2), 83-97.
8. Kocatürk, M. and Çiçek, İ. (2021). "Relationship Between Positive Childhood Experiences and Psychological Resilience İn University Students: The Mediating Role of Self-Esteem". Journal of Psychologists and Counsellors İn Schools, 1-12.
9. Li, L, Hou, Y, Li, L, Hou, Y, Kang, F. and Wei, X. (2020). "The Mediating and Moderating Roles of Resilience İn The Relationship Between Anxiety, Depression, And Post-Traumatic Growth Among Breast Cancer Patients Based On Structural Equation Modeling: An Observational Study". Medicine (Baltimore), 11; 99(50): E23273. Doi: 10.1097/MD.0000000000023273
10. Özçetin, Y.S.Ü. ve Hiçdurmaz, D. (2017). "Kanser Deneyiminde Travma Sonrası Büyüme ve Psikolojik Sağlamlık. (Posttraumatic Growth and Resilience İn Cancer Experience)". Psikiyatride Güncel Yaklaşımlar, 9(4), 388-397. Https://Doi.Org/10.18863/Pgy.290285
11. Gao, W, Zhu, S, Bai, H. and Gao, L. (2018). "Quality of Life and İts Related Factors İn Caregivers of Patients with Breast Cancer". Chinese Journal of Practical Nursing, 1686-1691.Doi: 10.3760/Cma.J.İssn.1672-7088.2018.22.002
12. Akpınar, N.B. ve Ceran, M.A. (2019). "Kronik Hastalıklar Ve Rehabilitasyon Hemşireliği. (Chronic Diseases And Rehabilitation Nursing)". Adnan Menderes Üniversitesi Sağlık Bilimleri Fakültesi Dergisi, 3(2), 140-152.
13. Tedeschi, R.G. and Calhoun, L.G. (1996). "The Posttraumatic Growth İnventory: Measuring The Positive Legacy of Trauma". J Trauma Stress. 9:455-71. Https://Doi.Org/10.1007/BF02103658

14. Kağan, M, Güleç, M, Boysan, M. ve Çavuş, H. (2012). "Hierarchical Factor Structure of the Turkish Version of the Posttraumatic Growth Inventory İn A Normal Population". TAF Preventive Medicine Bulletin, 11(5):617-624.B. Doi: 10.5455/Pmb.1-1323620200
15. Doğan, T. (2015). "Kısa Psikolojik Sağlamlık Ölçeğinin Türkçe Uyarlaması: Geçerlik ve Güvenirlik Çalışması". The Journal of Happiness & Well-Being. 3(1), 93-102.
16. Smith, B, W, Dalen, J, Wiggins, K, Tooley, E, Christopher, P. and Jennifer Bernard, J. (2008). "The Brief Resilience Scale: Assessing The Ability to Bounce Back". International Journal of Behavioral Medicine, 15, 194–200. Https://Doi.Org/10.1080/10705500802222972
17. Kardaş, F. ve Tanhan, F. (2018). "Van Depremini Yaşayan Üniversite Öğrencilerinin Travma Sonrası Stres, Travma Sonrası Büyüme ve Umutsuzluk Düzeylerinin İncelenmesi. (Investigating Posttraumatic Stress, Posttraumatic Growth And Hopelessness Levels Of University Students Exposed To The Van Earthquake)". Van Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi, 15(1), 1-36. Http://Dx.Doi.Org/10.23891/Efdyyu.2018.60
18. Duman, N. (2019). "Travma Sonrasi Büyüme ve Gelişim. (Posttraumatıc Growth and Development)". Uluslararası Afro-Avrasya Araştırmaları Dergisi, 4(7), 178-184.
19. Gökmen, G. ve Deniz, M.E. (2020). "Travma Sonrası Büyümenin Yordayıcıları Olarak Öz-Anlayış ve Affetme. (Self-Compassion and Forgiveness as The Predictors of the Post-Trauma Growth)". Uluslararası Türk Kültür Coğrafyasında Sosyal Bilimler Dergisi, 5(2), 72-93.
20. Çimen, S. (2020). "Öldürmeyen Acı Güçlendirir Mi? Travma Sonrası Büyüme Ve Kolektivistik Başa Çıkma Stillerinin İlişkisi. (If Something Not Killing Could Be Strengthned? The Relationship Between Collectivistic Coping Styles and Post Traumatic Growth)". Türkiye Bütüncül Psikoterapi Dergisi, 3(5), 158-174.
21. Hoşoğlu, R, Kodaz, A.F, Bingöl, T.Y. ve Batık, M. V. (2018). "Öğretmen Adaylarında Psikolojik Sağlamlık. (The Resilient Levels of Preservice Teachers)". OPUS International Journal of Society Researches, 8(14), 217-239. Https://Doi.Org/10.26466/Opus.405751
22. Çelebi, G.Y. (2020). "Covid 19 Salgınına İlişkin Tepkilerin Psikolojik Sağlamlık Açısından İncelenmesi. (Investigation of Reactions to The Covid 19 Outbreak İn Terms of Psychological Resilience)". IBAD Sosyal Bilimler Dergisi, (8), 471-483. Https://Doi.Org/10.21733/İbad.737406
23. Hirani, S, Lasiuk, G. and Hegadoren, K. (2016). "The İntersection of Gender and Resilience". Journal of Psychiatric and Mental Health Nursing, 23(6-7), 455–467. Https://Doi.Org/10.1111/Jpm.12313
24. Masood, A, Masud, Y. and Mazahir, S. (2016). "Gender Differences İn Resilience and Psychological Distress of Patients with". Burns, 42(2), 300-306. Https://Doi.Org/10.1016/J.Burns.2015.10.006
25. Aydın, M. and Egemberdiyeva, A. (2018). "Üniversite Öğrencilerinin Psikolojik Sağlamlık Düzeylerinin İncelenmesi. (An Investigation of University Students' Resilience Levels)". Türkiye Eğitim Dergisi, 3(1), 37-53.
26. Infurna, F.J. and Jayawickreme, E. (2019). "Fixing The Growth İllusion: New Directions for Research İn Resilience and Posttraumatic Growth". Current Directions İn Psychological Science, 28(2), 152-158. Https://Doi.Org/10.1177/0963721419827017
27. Nuccio, A.G. and Stripling, A.M. (2021). "Resilience and Post-Traumatic Growth Following Late Life Polyvictimization: A Scoping Review". Aggression and Violent Behavior, 57, 101481. Https://Doi.Org/10.1016/J.Avb.2020.101481
28. Aafjes-Van Doorn, K, Békés, V, Luo, X, Prout, T.A. and Hoffman, L. (2022). "Therapists' Resilience and Posttraumatic Growth During The COVID-19 Pandemic. Psychological Trauma": Theory, Research, Practice and Policy, 14(S1), S165. Https://Doi.Org/10.1037/Tra0001097
29. Shi, J, Sznajder, K.K, Liu, S, Xie, X, Yang, X. and Zheng, Z. (2022). "Resilience and Posttraumatic Growth of Patients with Breast Cancer During the Covid-19 Pandemic İn China: The Mediating Effect of Recovery". Frontiers İn Psychology, 12, 6701. Https://Doi.Org/10.3389/Fpsyg.2021.811078
30. Jung, S.Y. and Park, J.H. (2021). "Association of Nursing Work Environment, Relationship with The Head Nurse, And Resilience with Post-Traumatic Growth İn Emergency Department Nurses". International Journal of Environmental Research and Public Health, 18(6), 2857. Https://Doi.Org/10.3390/İjerph18062857
31. Şanli, M.E, Dinç, M, Öner, U, Buluş, M, Çiçek, İ. and Doğan, İ. (2023). "The Role of Spirituality in Anxiety and Psychological Resilience of Hemodialysis Patients in Turkey". Journal of Religion and Health, 1-19.
32. Yıldırım Üşenmez, T, Öner, U, Şanlı, M.E. and Dinç, M. (2023). "The Effect of Spirituality On Psychological Resilience in Women with Breast Cancer Who Have Received Chemotherapy: A Cross-Sectional Study from Turkey". Journal of Religion and Health, 62(3) 1964-1975.