Miyokard İnfarktüsü Geçirmiş Hastalarda Travma Sonrası Büyüme ve Öz Bakım Gücü: Beni Öldürmeyen Şey Güçlendirir mi?

Attitudes and Literacy of Physiotherapy Students Toward Artificial Intelligence: The Impact of Artificial Intelligence Education

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ÖZ

Amaç: Bu çalışmada, MI geçirmiş hastalarda travma sonrası büyümenin öz bakım gücüne etkisi incelendi.

Gereç ve Yöntem: Çalışma İstanbul'da bulunan bir Şehir hastanesinde 24 Mart- 23 Temmuz 2024 tarihleri arasında kardiyoloji polikliniklerine başvuran 397 hasta ile yürütüldü. Araştırma verileri, Hasta Bilgi Formu, Travma Sonrası Büyüme Envanteri ve Öz Bakım Gücü Ölçeği ile elde edildi.

Bulgular: Hastaların bel çevresi ortalaması 103,06±16,93 cm, EF (%) 46,39±12,6, %76,8'i ek kronik hastalık bulunmakta, %74,1'i hipertansiyon hastası, %89,7'sinin bakımına destek olan biri bulunmakta, %51,4'ü fiziksel aktivite yapmakta, %70,3'ü 1 kez kalp krizi geçirmiş, %58,7'sinin son kalp krizi üzerinden 0-6 ay geçmiş ve %59,7'sinin ailesinde kalp krizi geçiren birey bulunmaktadır. Hastaların Benlik Algısında Değişim ortalaması 25,3±16,42, Yaşam Felsefesinde Değişim ortalaması 11,46±7,84, Başkalarıyla İlişkilerde Değişim ortalaması 10,43±8,94, Travma Sonrası Büyüme Envanteri ortalaması 47,2±31,11 ve Öz Bakım Gücü Ölçek ortalaması 101,74±20,75'tir. Travma sonrası büyümenin öz bakım gücü üzerindeki etkisini incelemek amacıyla yapılan basit doğrusal regresyon analizi anlamlı bulunmuştur (F=27,886, p<0,001). Analiz sonuçlarına göre, travma sonrası büyüme değişkeni (β=0,257, p<0,01) öz bakım gücünü pozitif yönde ve anlamlı şekilde etkilemektedir.

Sonuç: Hastaların travma sonrası büyümeleri ile öz bakım güçleri orta düzeyde bulunmuştur. Travma sonrası büyüme arttığında öz bakım gücünün de arttığı görülmüştür.

Anahtar Kelimeler: Hemşire; Miyokard İnfarktüsü; Öz Bakım Gücü; Travma Sonrası Büyüme.

ABSTRACT

Aim: The study examined the effects of post-traumatic growth on self-care agency in patients who had suffered an MI.

Methods: The study was conducted with 397 patients who applied to the Cardiology Clinics of a city hospital in Istanbul between March 24 and July 23, 2024. The data of the study were collected with the Patient Information Form, Post-Traumatic Growth Inventory, and Self-Care Ability Scale.

Results: The mean waist circumference of the patients was found to be 103.06±16.93 cm, EF (%) was 46.39±12.6, 76.8% had comorbidities, 74.1% had hypertension, 89.7% had someone who supported their care, 51.4% were doing physical activity, 70.3% had had 1 heart attack, 58.7% had 0-6 months since their last heart attack, and 59.7% had a family member who had a heart attack. The mean change in self-perception of the patients was 25.3±16.42, the mean change in philosophy of life was 11.46±7.84, the mean change in relationships with others was 10.43±8.94, the mean Post-Traumatic Growth Inventory was 47.2±31.11, and the mean self-care agency scale was 101.74±20.75. The results of the simple linear regression analysis that was carried out in order to ascertain the impacts of post-traumatic growth on self-care agency were found to be statistically significant (p<0.001). The post-traumatic growth variable (β=0.257, p<0.01) shown a positive and statistically significant impact on the self-care agency of the individuals.

Conclusion: The post-traumatic growth and self-care abilities of the patients were found to be at moderate levels, and as post-traumatic growth increased, self-care abilities also increased.
Keywords: Myocardial Infarction; Nurse; Post-Traumatic Growth; Self-Care Agency.

INTRODUCTION

Also known as the leading cause of mortality in the world, Coronary Artery Disease (CAD) is the most common heart disease. The World Health Organization (WHO) reported that CAD is the first among the top 10 causes of all-cause mortality (1). Cardiovascular Diseases (CVD) were responsible for 36.8% of deaths in Turkiye in 2019. CAD constituted 39.1% of these deaths, cerebrovascular diseases constituted 22.2%, and other heart diseases constituted 25.7% (2). Advances in surgical and medical treatment in CAD have reduced cardiac death rates. However, it is also known that individuals with this disease are at risk of heart failure, unstable angina pectoris, and Myocardial Infarction (MI) (3). The clinical presentation of CAD is usually silent ischemia, stable and unstable angina, MI, heart failure, and sudden mortality (4). MI is considered a traumatic experience because it is a sudden, unexpected, and life-threatening condition that might subsequently cause various psychological problems in individuals (5).

Trauma is defined as unexpected events that paralyze the individual's adaptive coping strategies, such as death or the threat of death, or a threat to the individual's physical or vital integrity. It is possible for traumatic situations and a variety of undesirable behavioral, psychological, and emotional results to be brought about by highly stressful occurrences or major life events (for example, serious diseases, traffic accidents, the loss of a relative or loved one, unemployment, divorce, and so on) (6). Post-traumatic growth refers to a more positive growth or development rather than the development of negative reactions following traumatic events. The process of recognizing stressful events in patients may be facilitated by post-traumatic growth, which may also produce a positive perspective in patients and their relatives, as well as transform the lifestyles of patients. Individuals' emotional and cognitive lives undergo major transformations as a result of this notion, which in turn has a favorable impact on their behavior and functions (7). Experiencing a cardiac event or living with CVD is often intensely stressful and might even be traumatic. A total of 75% of individuals who experience a cardiac event describe the event as traumatic (8). However, not all outcomes of cardiac disease and cardiac events are negative. It is reported in previous studies that patients grow or change positively as a result of their heart disease or events (9). The occurrence of MI can lead to positive psychological changes such as post-traumatic growth (10). It is also reported that people who experience post-traumatic growth during the disease after MI are less likely to have a recurrent heart attack than other patients (7). Nurses and caregivers can use these results to help patients cope with challenging conditions after MI (10).

Coronary artery disease causes a lack of social activity, the patient thinks that they will continue their lives with this disease, people see themselves as different from other people, and experience social isolation with a sense of loneliness (11). Because of these impacts, MI makes it difficult for individuals to perform their responsibilities within the realm of self-care (12). The ability of an individual to demonstrate the behaviors necessary to maintain their well-being is defined as self-care agency. For an individual to use self-care agency, they need to have certain characteristics, such as taking care of their health, using their energy in a controlled manner, evaluating the situation with a self-care approach when making decisions, making appropriate decisions, and implementing and sequencing actions. When an individual has these characteristics, self-care agency is sufficient. However, when an individual cannot meet these requirements, self-care deficiency occurs, the expected self-care behaviors cannot be developed, and thus they are insufficient in maintaining their health and well-being (13).

In cases where patients cannot meet the needs that they need to maintain a healthy life, nurses play active roles in this process by providing supportive interventions that will increase the patient's self-care capacity. Firstly, nurses must identify the problems experienced by the patients in terms of self-care and determine their inadequacies (14). Developing psychosocial or

behavioral problems can affect patients' compliance with treatment, care, quality of life, duration of treatment, prognosis, mortality, and morbidity (15). Post-traumatic growth is closely associated with an individual's rediscovery of the self, the attribution of new meaning to life, and the development of self-care skills following traumatic experiences. Self-care involves cultivating self-compassion, self-worth, and an active sense of well-being, which constitute fundamental components of post-traumatic growth. Studies indicate that post-traumatic growth is positively related to self-care and self-compassion, while psychological flexibility and resilience further strengthen this process. Self-care and self-compassion play a mediating role in overcoming psychological distress experienced after trauma (e.g., myocardial infarction) and in fostering positive changes (16,17). The current literature reported that TSB and self-care capacity are important in patients with MI (3,7). However, no study has been detected that evaluates the effects of the two variables on patients with MI. Since MI is one of the most common and important causes of death in the world, and its consequences can affect the lives of individuals and society, (1) understanding the concept of post-traumatic growth and self-care capacity and examining the relationship between them can provide valuable information for patients and healthcare personnel. Addressing these variables will allow healthcare professionals to develop targeted interventions to improve self-care agency in patients with MI and provide better quality healthcare services to patients. In light of this information, the present study examined the effects of post-traumatic growth on self-care agency in patients with MI.

METHODS
Type of Study
The research was conducted using a descriptive and cross-sectional methodology.
Study Questions
1. What are the post-traumatic growth and self-care agency levels of patients with Myocardial Infarction?
2. Does post-traumatic growth affect self-care agency in patients with Myocardial Infarction?

Population and Sample of Study
The study was conducted with patients who applied to the Cardiology Clinics in a city hospital in Istanbul between March 24 and July 23, 2024. Since the population size (N) is unknown, the formula $n = t^2 \cdot p \cdot q / d^2$ was used to determine the sample size. Based on this calculation, the sample size was found to be 384 individuals. Within the scope of the study, the simple random sampling method was employed. Data were collected from 397 individuals who met the inclusion criteria during the specified dates. The participants to be included in the study were selected using the simple random sampling method. This method is one of the probability sampling techniques in which each individual in the population has an equal chance of being selected, minimizes bias, and allows for obtaining a highly representative sample. In this way, the generalizability of the findings obtained in the study was enhanced.

Inclusion Criteria
- Being 18 years of age or older
- Having cognitive adequacy to answer the questions in the data collection tools
- Having no communication problems (hearing, language, understanding, etc.)
- Having a history of MI (0-24 months)
- Volunteering to participate in the study
- Not having a psychiatric diagnosis

Data Collection Tools
Patient Information Form, Post-Traumatic Growth Inventory, and Self-Care Ability Scale were the instruments that were utilized in the process of data collection.

Patient Information Form: The researchers were responsible for preparing the form in order to ascertain the socio-demographic and disease-related features of the patients who were taking part in the study. The questionnaire consists of twenty-one questions, which include inquiries on the respondent's age, marital status, gender, educational status, the specific person with whom they reside, employment status, and the presence of various chronic diseases.

Posttraumatic Growth Inventory (PTGI): The scale was developed to learn how successfully individuals cope after trauma and how their perspectives on themselves, others, and the meaning of life change. Its validity and reliability for Turkish was conducted by Kağan et al in 2012 (18). The scale consists of 21 items, 6 Likert-type scales, and 3 sub-dimensions. The sub-dimensions that are included on the scale are as follows: "Change in Relationships with Others (6, 8, 9, 20, and 21), Change in Philosophy of Life (1, 2, 3, 4, 7, 14), and

Change in Self-Perception (5, 10, 11, 12, 13, 15, 16, 17, 18, 19)". When using the scale, the score that can be obtained is specified as ranging from 0 to 105. An individual is considered to have demonstrated post-traumatic growth if the score that they earn from the scale increases. The dependability coefficients of the overall scale and its sub-dimensions were found to fall somewhere in the range of 0.77 to 0.92 according to Cronbach's Alpha (18).

Self-Care Abilities Scale (SCAS): Nahcivan was the one who carried out the study on the validity and reliability of the Spanish version of the scale that was established to measure the self-care capabilities of individuals. The scale consists of 35 items and a Likert scale with four points (0 being the least accurate description of me and 4 being the most accurate description of me). Due to the fact that eight of the statements on the scale are deemed to be negative, the scoring is inverted. These statements are 3, 6, 9, 13, 19, 22, 26, and 31. When the patients have a high total score on the scale, it suggests that they are capable of executing their own self-care in an independent and sufficient manner themselves. There are a total of 140 points that serve as the basis for the evaluation. Below 82 points is considered to be low, between 82 and 120 points is considered to be medium, and beyond 120 points is considered to be high. Cronbach's Alpha reliability coefficient was found to be 0.89 as a result of the validity and reliability study that was conducted on the scale (19).

Data Analysis

In order to conduct the analysis, the data that was collected from the patients was first compiled into a data set by utilizing the statistical package program known as SPSS 25.0. For the purpose of this evaluation, which was carried out in a computer setting, descriptive statistics concerning the variables were presented in the form of percentages, numbers, arithmetic standard deviations, and means. In order to investigate the normalcy of the distribution, the skewness and kurtosis coefficients were utilized, and the Cronbach's alpha value was utilized in order to ascertain the degree of internal consistency. In order to examine the impact that post-traumatic growth has on self-care agency, regression analysis was an approach that was utilized. Following the evaluation of the results, a significance level of $p < 0.05$ was utilized.

Ethical Dimensions

For the purpose of carrying out the study, institutional authorization was acquired from the Ethics Committee of a university (dated 22.12.2023 and numbered 2023/08) as well as from the Provincial Health Directorate (dated 03.03.2023 and numbered 15689) for the study to be carried out in the hospital that was relevant to the study. Prior to the starting of the investigation, each patient who was going to be a part of the sample was given information regarding the objectives of the study, and a written consent form was used to gain their written approval. The ethical principles outlined in the Declaration of Helsinki were adhered to throughout the course of this research project. Participation in the study was voluntary, and the participants' personal information was kept anonymous during the duration of the research.

RESULTS

The mean age of the patients was found to be 63.09±11.42 years, mean BMI was 28.1±4.62, 70.8% were male, 80.1% were married, 96.7% had children, 65% were primary school graduates, 75.3% were unemployed, 60.5% had equal income and expenses, 52.9% lived with their spouses and children, 67% did not smoke, and 93.5% did not drink alcohol (Table 1).

The mean waist circumference of the patients was found to be 103.06±16.93 cm, EF (%) was 46.39±12.6, 76.8% had comorbidities, 74.1% had hypertension, 89.7% had someone who supported their care, 51.4% were doing physical activity, 70.3% had had 1 heart attack, 58.7% had 0-6 months since their last heart attack, and 59.7% had a family member who had a heart attack (Table 2).

Table 1. Sociodemographic Characteristics of Patients

		Mean±SD	Min-Max (Median)
Age		63.09±11.42	29-88 (63)
Body Mass Index		28.1±4.62	17.63-42.77 (27.55)
		n	**%**
Sex	**Female**	116	29.2
	Male	281	70.8
Marital status	**Married**	318	80.1
	Single	79	19.9
Having Children	**Yes**	384	96.7
	No	13	3.3
Educational Status	**Illiterate**	37	9.3
	Literate	13	3.3
	Primary education	258	65.0
	High school	56	14.1
	University and Above	33	8.3
Working Status	**Working**	98	24.7
	Not Working	299	75.3
Income Status	**Income is Lower than Expenses**	69	17.4
	Income Equals Expense	240	60.5
	Income is More Than Expense	88	22.2
People Living Together	**Spouse**	89	22.4
	Spouse and Children	210	52.9
	Living Alone	31	7.8
	Other	67	16.9
Smoking Status	**Yes**	131	33.0
	No	266	67.0
Alcohol Use Status	**Yes**	26	6.5
	No	371	93.5

Table 2. Disease-Related Characteristics of Patients

		Mean±SD	Min-Max (Median)
Waist Circumference		103.06±16.93	58-158 (100)
EF (%)		46.39±12.6	15-65 (50)
		n	**%**
Comorbidity Status	**Yes**	305	76.8
	No	92	23.2
Comorbidities	**Diabetes**	184	60.3
	Hypertension	226	74.1
	Chronic Renal Failure	26	8.5
	COPD	22	7.2
	Hyperlipidemia	52	17.0
	Heart failure	18	5.9
	Thyroid	10	3.3
	Chronic Arterial Disease	17	5.6
	Other	57	18.7
Number of Comorbidities	**1 Disease**	114	37.4
	2 Diseases	98	32.1
	3 Diseases and Above	93	30.5

Table 2. (Cont.)

Presence of Someone Supporting the Care	**Yes**	356	89.7
	No	41	10.3
Physical Activity / Exercise Status	**Yes**	204	51.4
	No	193	48.6
Number of Heart Attacks	**1 Time**	279	70.3
	2 Times	75	18.9
	3 Times and More	43	10.8
Time Since Last Heart Attack	**0-6 Months**	233	58.7
	6-12 Months	22	5.5
	12-24 Months	142	35.8
Family History of Another Heart Attack	**Yes**	237	59.7
	No	160	40.3

The mean change in patients' self-perception was found to be 25.3±16.42, the mean change in philosophy of life was 11.46±7.84, the mean change in relationships with others was 10.43±8.94, the mean Post-Traumatic Growth Inventory was 47.2±31.11, and the mean self-care agency scale was 101.74±20.75 (Table 3). There was a statistically significant positive correlation between Change in Relationships with Others and the Self-Care Agency Scale ($r = .18$, $p < .01$), Change in Philosophy of Life and the Self-Care Agency Scale ($r = .25$, $p < .01$), and the Post-Traumatic Growth Inventory and the Self-Care Agency Scale ($r = .16$, $p < .01$). These results indicate that as post-traumatic growth increases, so does an individual's self-care agency (Table 4).

Table 3. Post-Traumatic Growth Inventory and Self-Care Ability Scale Evaluations

		Mean±SD	Min-Max (Median)
Post-Traumatic Growth Inventory Sub-Dimensions	Change in Self-Perception	25.3±16.42	0-50 (26)
	Change in Philosophy of Life	11.46±7.84	0-25 (11)
	Change in Relationships with Others	10.43±8.94	0-30 (9)
Posttraumatic Growth Inventory		47.2±31.11	0-105 (45)
Self-Care Ability Scale		101.74±20.75	25-136 (105)

Table 4. Correlation Between Post-Traumatic Growth Inventory and Self-Care Agency Scale

Variable		1	2	3	4	5
1. Change in Self-Perception	r	1				
	p	.				
2. Change in Relationships with Others	r	.830*	1			
	p	.000	.			
3. Change in Philosophy of Life	r	.813*	.762*	1		
	p	.000	.000	.		
4. Post-Traumatic Growth Inventory	r	.972*	.908*	.895*	1	
	p	.000	.000	.000	.	
5. Self-Care Agency Scale	r	.084	.183*	.252*	.159*	1.000
	p	.096	.000	.000	.001	.

p* < 0.05

For the purpose of determining the impact of the independent variable on self-care agency, a simple linear regression analysis was conducted. The results of this analysis were found to be statistically significant (F=27.886, p<0.001). A total of 0.06% of the overall variance in self-care agency can be attributed to the independent variables that are included in the model (p<0.01). Upon examination of the

regression coefficients, it becomes evident that the variable of post-traumatic growth (β=0.257, p<0.01) possesses a positive and statistically significant impact on the self-care agency. As a consequence of this, it was discovered that the level of self-care agency increases in tandem with the level of post-traumatic growth (Table 5).

Table 5. Simple Regression Analysis Results for Predicting Self-Care Ability with Independent Variables

				Univariable		
Model	Variables	B	S. Error	Standard (B)	t	p
1	Post-Traumatic Growth	0.171	0.032	0.257	5,281	0.001**
F=27.886, R=0.257, R² = 0.06						

DISCUSSION

In the present study, which was conducted to determine the effects of post-traumatic growth on self-care agency levels in patients who had an MI, post-traumatic growth was found to be moderate in patients (47.2±31.11). In a previous study conducted in Poland to examine post-traumatic growth status in patients after Myocardial Infarction, the mean TSBE score was found to be 47.2±21.8.18 In the study conducted in Canada to examine the post-traumatic growth status of coronary artery patients, the mean TSBE score was found to be 47.3±8.5 (21). The mean TSBE score obtained in our study is similar to the research results in the literature. In this study, it was considered that individuals may face not only negative outcomes but also some positive outcomes after trauma, and that they may be evaluated as survivors rather than victims after trauma. Unlike chronic diseases, the sudden and unexpected nature of MI and the fact that it poses a great threat to life poses a threat to the physical and psychological integrity of the person, and therefore, MI is considered one of the most common traumatic experiences for all people, regardless of geography, language, race, or culture. The fact that MI is a common trauma also allows for the experience of development after trauma, and therefore, people who

experience MI report that they experience positive changes in their lives in various dimensions after the crisis (5). Among many different studies, MI has also been considered as a type of trauma, and it has been revealed that the trauma experienced after MI can cause positive changes in the individual's life (21,22). Castilla and Vázquez evaluated people who had MI at three different times: 2-3 days, 5 months, and 13 months after the heart attack, and found that participants had more positive emotions at all three times. The researchers argued that MI may have only a small effect on subsequent stress-related psychopathologies (23). Results such as positive emotions experienced after MI, developments in relationships, and the absence of psychopathologies such as PTSD draw attention to the possibility of development after MI (5). Indeed, according to the data of a qualitative study conducted with MI patients, having a heart attack makes patients question the meaning of life and priorities in life and find different answers than before, and patients describe the heart attack as a turning point in their lives and state that there have been many positive changes in their lives since this point (23).

In the present study, the self-care agency of patients who had MI was found to be moderate.

Many individuals with heart disease have difficulty returning to their daily lives (25). Self-care is a key component of daily management of CAD, along with the need to implement behaviors that maintain physiological and emotional stability, monitor symptoms, and manage symptoms as they occur (3). In different studies, self-care ability in patients was found to be at a moderate level (26-28). Patients with self-care and self-management skills are hospitalized less frequently and have lower mortality and cost rates.

The results show that individuals have a certain amount of difficulty coping with the disease and maintaining healthy lifestyle behaviors after MI. Individuals with a moderate level of self-care agency may have difficulty maintaining lifestyle changes after the disease. Behaviors that need to be integrated into daily life, such as diet, exercise, medication use, and stress management, might challenge individuals' physical and psychosocial adaptation. In addition, the chronic nature of the disease and the risk of recurrence can create anxiety and hopelessness in individuals, which can negatively affect self-care behaviors. To prevent a decrease in cardiac function, it is necessary to periodically monitor the degree of self-care in patients followed up after MI. The fact that the self-care ability remains at a moderate level may be due to various factors such as the inability of individuals to fully adopt lifestyle changes, the chronic nature of the disease, psychological effects, and lack of social support (29). Therefore, it is recommended to develop structured nursing interventions and educational programs to increase the self-care ability of individuals who have had MI (30).

As a result of the evaluations, it was found that the post-traumatic growth variable had a positive and significant effect on self-care ability. Self-care ability increased when post-traumatic growth increased. Post-traumatic growth is a complex process that can affect individuals' self-care behaviors in various ways. Post-traumatic growth in individuals occurs with the efforts to cope with negative psychological problems that may be experienced after the trauma encountered. Individuals who face these problems that disrupt the existing routine of their lives feel stronger and more independent after completing the process and reshape their lives with

stronger, more active, more enterprising, and future-oriented plans compared to before the trauma. It has been observed that the communication skills of these individuals are also more developed compared to their pre-traumatic skills, and they can communicate much better and become stronger with individuals who have a common trauma history (31). Post-traumatic growth, unlike concepts such as self-resilience, adaptation, optimism, and resilience, corresponds to a transformation mechanism, that is, a characteristic change in the process. In other words, self-resilience describes an effective adaptation in adverse conditions, while post-traumatic growth describes the strengthening that comes after adverse conditions. In general, it can create an increased appreciation for life, more meaningful interpersonal relationships, an increased sense of personal power, changing priorities, and a richer existential and spiritual life (32). The process of recognizing stressful situations in patients can be made easier through post-traumatic growth, making it possible for patients and their relatives to have a more optimistic outlook, and causing patients to alter their lifestyles. Through the implementation of this idea, individuals experience significant shifts in their emotional and cognitive lives, which in turn have a beneficial impact on their behavior and functioning (7). In the study, participants also stated that they made changes in their lives after a Myocardial Infarction. It is seen that these changes are especially aimed at developing healthy behaviors. Participants stated, "I made changes in my lifestyle to avoid having another heart attack. I always pay attention to my medication and diet" (Participant 1, 53 years old, male). "I started to pay more attention to my personal care. I started to consume more of the foods I like, whether they are beneficial or harmful. I quit smoking after the heart attack. I quit working" (33). In a study conducted on breast cancer patients, it was reported that post-traumatic growth increases self-care adequacy (34). It is generally considered that factors such as increased sense of worth, strengthened self-perception, developing relationships, and search for meaning can direct individuals to self-care in a more conscious and motivated manner.

This study shows that psychological adaptation particularly PTG improves self-care agency in myocardial infarction patients. These findings

show that nurses should help patients' emotional and cognitive processes after a cardiac incident in addition to physical recovery. Clinicians can help patients see their MI as a turning point and take more responsibility for illness management by recognizing and supporting PTG. Standard cardiac rehabilitation programs may benefit from trauma-informed care and psychoeducation. Early PTG and self-care capability evaluation can drive individualized care planning, and organized support programs that encourage resilience, meaning-making, and self-reflection may improve long-term health outcomes. Psychological growth empowers patients, enhancing their quality of life and cardiac prognosis.

CONCLUSION

The post-traumatic growth and self-care agency of the patients were found to be at a moderate level. When post-traumatic growth increased, self-care agency also increased. The post-traumatic growth and self-care agency of the patients must be evaluated at certain intervals. Considering that post-traumatic growth positively affects self-care agency, health professionals must develop psychoeducation programs that will enable patients to realize the positive changes they experience after trauma and to support this process. In this way, both the mental resilience and self-care capacity of individuals can be increased, and their more active participation in the recovery process can be ensured. It is recommended that the study be conducted in a larger sample group. The necessity for nurses to approach patients not only from a biomedical perspective but also in terms of the psychosocial processes they experience following a traumatic life event. This highlights the importance of planning nursing care with a holistic approach.

REFERENCES

1. World Health Organization. Cardiovascular diseases. Accessed May 19, 2023. https://www.who.int/health-topics/cardiovascular-diseases#tab=tab_1
2. Türkiye İstatistik Kurumu. Ölüm nedeni istatistikleri, 2019. Accessed May 19, 2023. https://data.tuik.gov.tr/Bulten/Index?p=Olum-ve-Olum-Nedeni-Istatistikleri-2019-33710
3. Dickson VV, Lee CS, Yehle KS, Mola A, Faulkner KM, Riegel B. Psychometric testing of the self-care of coronary heart disease inventory (SC-CHDI). Res Nurs Health. 2017;40(1):15-22. doi:10.1002/nur.21755
4. Duğan Ö, Bektaş H. Koroner arter hastalarında kalp yaşam kalitesi ölçeği'nin Türkçeye uyarlama çalışması. Turk J Cardiovasc Nurs. 2020;11(25):71-81.
5. Kaya Yıldırım İ, Dirik G. Kalp krizi sonrası hayata farklı bakmak: Miyokard infarktüsü geçirmiş hastalarda travma sonrası gelişim. Nesne. 2022;10(23):169-188. doi:10.7816/nesne-10-23-10
6. Çimen S. Öldürmeyen acı güçlendirir mi? Travma sonrası büyüme ve kolektivistik başa çıkma stillerinin ilişkisi. Türkiye Bütüncül Psikoterapi Derg. 2020;3(5):158-174.
7. Rahimi R, Heidarzadeh M, Shoaee R. The relationship between posttraumatic growth and social support in patients with myocardial infarction. Can J Cardiovasc Nurs. 2016;26(2):19-24.
8. Magid K, El-Gabalawy R, Maran A, Serber ER. An examination of the association between post-traumatic growth and stress symptomatology in cardiac outpatients. J Clin Psychol Med Settings. 2019;26:271-281. doi:10.1007/s10880-018-9587-2
9. Bluvstein I, Moravchick L, Sheps D, Schreiber S, Bloch M. Posttraumatic growth, posttraumatic stress symptoms and mental health among coronary heart disease survivors. J Clin Psychol Med Settings. 2013;20:164-172. doi:10.1007/s10880-012-9318-z
10. Hosseinigolafshani SZ, Taheri F, Nia HS, Zeabadi SM. Relationship between posttraumatic growth and meaning in life among patients with myocardial infarction. Jundishapur J Chronic Dis Care. 2019;8(3):e91439. doi:10.5812/jjcdc.91439
11. Yıldırım NK, Öztürk S. Kardiyovasküler hastalıklarda güncel psikososyal yaklaşımlar. Kardiyovasküler Hemşirelik Derg. 2016;7(2):60-68.
12. Bucher L, Castellucci D. Nursing management coronary artery disease and acute coronary syndrome. In: Lewis SL, Dirksen SR, Heitkemper MM, Bucher L, Camera IM, eds. Medical Surgical Nursing: Assessment and Management of Clinical Problems. 8th ed. Elsevier Mosby; 2011:760-796.
13. Özer S, Sezgin D. Kalp yetersizliğinde öz bakım. Kalp Yetersizliği Elektronik Haber Bülteni. 2015;7(4):1-4.

14. Bayrak B, Yıldırım G, Oğuz S, Sağaltıcı Ç, Doğanay E, Özdemir F, Enez ÖF. Kalp yetersizliği hastalarında öz bakımı değerlendirme ve etkileyen risk faktörlerin belirlenmesi. Turk J Cardiovasc Nurs. 2019;10(23):114-121.

15. Turan Kavradım S, Sert M, Özer Z. Miyokard infarktüsü geçiren bireylerin ölüm kaygısı ve başa çıkma tutumlarının belirlenmesi. Turk J Cardiovasc Nurs. 2022;13:1-9.

16. Kağan M, Güleç M, Boysan M, Çavuş H. Travma sonrası büyüme envanteri'nin Türkçe versiyonunun normal toplumda hiyerarşik faktör yapısı. TAF Prev Med Bull. 2012;11(5):617-624.

17. Khursheed M., Shahnawaz MG. (2020). Trauma and post-traumatic growth: Spirituality and self-compassion as mediators among parents who lost their young children in a protracted conflict. *Journal of religion and health*, *59*(5), 2623-2637. https://doi.org/10.1007/s10943-020-00980-2.

18. Misurya P, Udgirkar N, Shukla V, Anand PV. Self-Compassion and Post Traumatic Growth: The Mediating Role of Psychological Flexibility. PsyArXiv; 2021. DOI: 10.31234/osf.io/q5fjd.

19. Nahcivan NÖ. Geçerlik ve güvenirlik çalışması: Öz Bakım Gücü Ölçeğinin Türkçe'ye uyarlanması. Hemşirelik Bülteni. 1994;7(33):109-119.

20. Łosiak W, Nikiel J. Posttraumatic growth in patients after myocardial infarction: the role of cognitive coping and experience of life threat. Health Psychol Rep. 2014;2(4):256-262. doi:10.5114/hpr.2014.45961

21. Leung YW, Gravely-Witte S, Macpherson A, Irvine J, Stewart DE, Grace SL. Post-traumatic growth among cardiac outpatients: degree comparison with other chronic illness samples and correlates. J Health Psychol. 2010;15(7):1049-1063. doi:10.1177/1359105310369667

22. Hassani P, Afrasiabifar A, Khoshknab MF, Yaghmaei F. Perceived positive effects of illness following acute myocardial infarction. Int J Nurs Midwifery. 2009;1(1):2-5.

23. Castilla C, Vázquez C. Stress-related symptoms and positive emotions after a myocardial infarction: a longitudinal analysis. Eur J Psychotraumatol. 2011;2:8082. doi:10.3402/ejpt.v2i0.8082

24. Baldacchino D. Myocardial infarction: a turning point in meaning of life. J Relig Health. 2011;50(4):939-953. doi:10.1007/s10943-010-9335-5

25. Dural G, Sarıtaş S. Miyokard infarktüsünde ev tabanlı eğitim ve yaşam kalitesi. Turk J Cardiovasc Nurs. 2017;8(17):86-94.

26. Akay B, Akyol AD. Kronik kalp yetersizliği olan hastalarda tele izlem yönteminin özbakım gücüne olan etkisinin incelenmesi. Türk Kardiyol Dern Kardiyovasküler Hemşirelik Derg. 2014;5(8):75-88.

27. Çelik Ayar M, Mutluay Yayla E. Yaşlı hipertansiyon hastalarında kırılganlık ve öz bakım gücü arasındaki ilişki. Turk J Cardiovasc Nurs. 2024;15(38):121-127. doi:10.5543/khd.2024.37232

28. Ermiş N, Kasar Sayın K, Karaman E, Yıldırım Y. Kronik kalp yetersizliği olan hastalarda öz bakım gücü ve yorgunluk. Turk J Cardiovasc Nurs. 2018;9(20):105-112.

29. Riegel B, Moser DK. Self-care: an update on the state of the science one decade later. J Cardiovasc Nurs. 2018;33(5):404-407. doi:10.1097/JCN.0000000000000517

30. Kim SH, Hwang SY, Shin JH, Lim YH. Self-care and related factors associated with left ventricular systolic function in patients under follow-up after myocardial infarction. Eur J Cardiovasc Nurs. 2021;20(1):5-13. doi:10.1093/eurjcn/zvaa008

31. Erten R, Kocakaya R. Travma sonrası büyüme ve anlam: bir vaka örneği. Mehmet Akif Ersoy Üniv Sos Bil Enst Derg. 2020;(31):189-204.

32. Kelly G, Morris R, Shetty H. Predictors of post-traumatic growth in stroke survivors. Disabil Rehabil. 2018;40(24):2916-2924. doi:10.1080/09638288.2017.1363300

33. Coşkun T. Miyokard infarktüsü geçiren bireylerin travma sonrası büyüme durumları, deneyimleri ve yaşamlarına etkisi [master's thesis]. Sağlık Bilimleri Enstitüsü; 2019.

34. Jia X, Cheng L, Yang F, Sun Y. Study on the relationship of post-traumatic growth with self-care efficacy and psychological resilience in patients with breast cancer. J Pract Nurs. 2015;31:2742-2745. doi:10.3760/CMA.J.ISSN.1672-7088.2015.36.003