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Original Article

The Effect of Perceived Stress on Quality of Life in Patients with Myocardial Infarction

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Abstract

Objectives: Myocardial infarction (MI) is a common heart disease with a high mortality rate. In patients with MI, factors such as social isolation, the presence of a previous MI, and the presence of diabetes mellitus in some patients can create stress in the patient. Perceived stress after MI may lead to an increase in the frequency of hospitalization, frequent cardiac problems, and difficulty in adapting to secondary prevention programs. Therefore, it is important to know the relationship between perceived stress and quality of life. This study aimed to determine the effect of perceived stress on quality of life in patients with MI.

Methods: The population of this descriptive and correlational study consisted of all patients diagnosed with MI (n=506) who applied to the adult outpatient clinic of a Hospital in Istanbul between January and June 2021. The sample of the study consisted of 300 patients who came to the polyclinic for examination at the time of the study, were over 18 years old, were diagnosed with MI, did not have any communication problems, and did not receive psychiatric treatment and agreed to participate in the study. Research data were collected using the survey technique, Perceived Stress Scale-14 (PSS-14), and TR MI Dimensional Assessment Scale.

Results: A moderate positive significant relationship was found between the PSS-14 and the TR MI Dimensional Assessment Scale ($r=0.656$; $p<0.01$). There was a negative significant relationship between the perceived stress level of patients diagnosed with MI and their quality of life levels, and as the patient's quality of life increased, their perceived stress level decreased. 42.9% of the patients' quality of life levels were affected by their perceived stress level.

Conclusion: In light of the data obtained from the study, it was determined that perceived stress had a negative impact on the quality of life in patients with MI, and as perceived stress increased, the patient's quality of life decreased.

Keywords: Myocardial infarction; quality of life; stress.

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Miyokard İnfarktüsü Geçiren Hastalarda Algılanan Stresin Yaşam Kalitesine Etkisi

Özet

Amaç: Miyokard infarktüsü sık rastlanan ve mortalite oranı yüksek olan bir kalp hastalığıdır. MI geçiren hastalarda sosyal izolasyon, önceden geçirilmiş MI varlığı, bazı hastalarda diyabetes mellitusun eşlik etmesi gibi faktörler hastada stres yaratabilmektedir. MI sonrası algılanan stres ise hastaneye yatış sıklığının artmasına, sık kardiyak problemlerin görülmesine ve ikincil koruma programlarına adaptasyon güçlüğüne neden olabilmektedir. Bu nedenle algılan stres ile yaşam kalitesi arasındaki ilişkinin bilinmesi önemlidir. Bu çalışmada MI geçiren hastalarda algılanan stresin yaşam kalitesine etkisini tespit etmek amaçlanmıştır.

Gereç ve Yöntem: Tanımlayıcı ve ilişkilendirici nitelikteki bu çalışmanın evrenini, İstanbul Kartal Koşuyolu Kalp Hastanesi Ocak–Haziran 2021 tarihleri arasında yetişkin polikliniğine başvuran MI tanısı almış tüm hastalar (n=506) oluşturmuştur. Araştırmanın örneklemini çalışmanın yapıldığı tarihlerde polikliniğe muayeneye

gelen 18 yaşından büyük, MI tanısı alan, herhangi bir iletişim sorunu olmayan, psikiyatrik tedavi almayan çalışmaya katılmayı kabul eden 300 hasta oluşturmuştur. Araştırma verileri anket tekniği ve Algılanan Stres Ölçeği-14 ve TR MI Boyutsal Değerlendirme Ölçeği kullanılarak toplanmıştır.

Bulgular: Algılanan Stres Ölçeği-14 ile TR MI Boyutsal Değerlendirme Ölçeği arasında orta düzeyde pozitif yönlü anlamlı bir ilişki saptanmıştır (r=0,656; p<0.01). MI tanısı almış hastaların algıladıkları stres düzeyi ile yaşam kalitesi düzeyleri arasında negatif yönlü anlamlı bir ilişki olduğu ve hastaların yaşam kalitesi arttıkça algıladıkları stres düzeyinin azaldığı ve hastaların yaşam kalitesi düzeylerinin %42,9'luk bölümünün algıladıkları stres düzeyinden etkilendiği saptanmıştır.

Sonuç: Araştırmadan elde edilen veriler ışığında, algılanan stresin MI geçiren hastalarda yaşam kalitesi üzerinde olumsuz etkiye neden olduğu ve algılanan stres arttıkça hastaların yaşam kalitesinin azaldığı belirlendi.

Anahtar sözcükler: Miyokart infarktüsü; yaşam kalitesi; stres.

Introduction

Cardiovascular diseases (CVDs) are the leading causes of mortality and morbidity all over the world. Coronary artery disease (CAD) ranks first in this regard.[1,2] CVD is known as chronic diseases that develop rapidly throughout life and are usually advanced by the time symptoms appear.[3] Myocardial infarction (MI) is a common heart disease with a high mortality rate. Thrombus, which forms as a result of damage or rupture of the plaque in the coronary arteries narrowed as a result of atherosclerosis, causes blockage of the coronary arteries. As a result of sudden and complete cessation of coronary blood flow, irreversible cell necrosis occurs due to prolonged ischemia in the relevant part of the myocardium fed by the coronary artery. This situation is defined as MI.[4] The main cause of MI is the thrombus that settles on it as a result of atherosclerotic plaque rupture or damage. The resulting clinical picture is determined by the size and depth of the plaque rupture, the oxygen demand of the distal myocardium, and the collateral blood flow to the distal myocardium.[5]

The World Health Organization (WHO) stated that coronary heart disease "is increasingly the leading cause of death in the world and has become a pandemic that knows no borders." In European countries, it has been determined that the deaths occurring in the population before the age of 75 are caused by CVD in 42% of women and 38% of men.[6] It is predicted by WHO that deaths due to CVD will reach 22.2 million in 2030. 46.2% (17.5 million) of the deaths worldwide in 2012 occurred due to CVD, and it is known that 7.4 million of this rate occurred due to MI.[6] It is predicted that one in every six men and one in every seven women in Europe will die due to MI.[7] In the Heart Disease and Risk Factors Frequency Screening in Adults in Türkiye (TEKHARF) study, which has been carried out since 1990 under the leadership of the Turkish Cardiology Association, it was stated that approximately 420 thousand coronary events occur annually in adults throughout the country. 120 thousand were detected as recurrence of acute events in patients with known CAD, 120 thousand as silent events and new chronic CAD, and 180 thousand as a new acute coronary syndrome.

Cardiac conditions such as heart failure and arrhythmia occurring after MI, decrease in physical functions of individuals, the persistence of cardiac risk factors, the possibility of experiencing MI again, social isolation, fear of death, and socioeconomic problems can negatively affect the health and quality of life of the individual in many ways. It is known that all these factors restrict the physical, emotional, and socioeconomic life of individuals and reduce their quality of life.[8,9]

Quality of life is defined as being satisfied with life, being financially well off, protecting one's physical health, being able to establish good relationships with individuals in one's social life, having sufficient social power in social life, and having time for individuals to improve themselves and have fun.[10] Although quality of life depends on many factors such as living conditions and freedom, it is accepted that the most important determinant is health.[10]

Quality of life plays an important role in determining the patient's response to treatment, the disease process, and possible health problems that may develop. The main purpose of treatment in chronic diseases is to reduce mortality and morbidity rates and improve the patient's quality of life. Low quality of life negatively affects the healing process and reduces the patient's compliance with treatment. At the same time, it makes it difficult for patients to perform daily living activities, increases the frequency of hospitalization, and increases the risk of complications and possible death.[3]

It is known that conditions such as age, gender, cardiovascular events, stress, and loss of physical functionality affect the quality of life in patients who have MI.[11] Factors such as social isolation, the presence of a previous MI, and the presence of diabetes mellitus in some patients may cause stress in patients with MI.[10] Due to the perceived stress after MI, situations such as depressive symptoms, increased frequency of hospitalization, frequent cardiac problems, and difficulty in adapting to secondary prevention programs such as cardiac rehabilitation may occur. Many emotional situations trigger CAD through autonomic nervous system stimuli that increase sympathetic activation. The sympathetic system causes heart rate and blood pressure to increase in stressful events. Thus, the workload of the myocardium increases, causing endothelial dysfunction and atherosclerosis.[10]

To accelerate the treatment process of patients, ensure their participation in the treatment process, and improve their quality of life in the future, health-care professionals need to know which risk factors to fight against to prevent the quality of life of patients from decreasing after MI.[12] While MI has unchangeable risk factors such as age, gender, and family history, there are also modifiable risk factors such as emotional stress, personality traits, sedentary life, smoking, alcohol use, and obesity.[13] WHO states that more than three-quarters of deaths due to CVD can be prevented with appropriate lifestyle changes.[14] An individual's healthy lifestyle behaviors reduce the risk of CVD.[15] The functions of nursing include evaluating the cardiac risk factors of individuals in case of MI, protecting and maintaining health against these risk factors, and improving the quality of life.[16] Therefore, this study aimed to determine the effect of per-

ceived stress on the quality of life in patients with MI. There has been no study on this subject in Türkiye, and it was decided to conduct this study with the idea that effective care, treatment, and rehabilitation programs can be created for stress, which is one of the reasons affecting the quality of life. In addition, it is thought that the results of this research will form the basis for other studies on the subject and support nursing initiatives.

Materials and Methods

Study Design

The research was conducted as a prospective, descriptive, and correlative study to determine the effect of perceived stress on the quality of life in patients who had MI. Data for the study were collected from patients diagnosed with MI who came to the adult cardiology outpatient clinic of a Hospital in Istanbul between December 15, 2020 and June 15, 2021. The study was approved by the Istanbul Okan University Non-invasive Clinical Research Ethics Committee (Decision no: 2020/2, Date: February 19, 2020).

Samples

The population of the study consisted of 506 patients diagnosed with MI who applied to the cardiology outpatient clinic of a Hospital in Istanbul between December 15, 2020, and June 15, 2021. The sample of the research was selected from this population. The ideal sample size was calculated as 300 and above. The criteria of being over 18 years old, being diagnosed with MI, not having any communication problems, not receiving psychiatric treatment, and volunteering to participate in the study were used in sample selection. Participants who filled out the survey forms incompletely, gave up participating in the study, and could not be reached were excluded from the study. The target number of 300 samples in the research was reached.

Measurements

Research data was collected through survey forms. After obtaining the necessary ethics committee approval to conduct the research, participants were invited to participate in the research. Before starting the research, the purpose of the study was explained and written consent was obtained from those who agreed to participate in the research. The survey form consisted of three parts: Introductory information form, Perceived Stress Scale-14 (PSS-14), and TR MI dimensional assessment scale.

Introductory information form: The survey form created by the researchers consisted of two parts (individual characteristics and disease-related characteristics). In the first part, the individual characteristics of patients (patient's age, gender, education level, marital status, profession, income level, smoking, and alcohol use) are evaluated, and in the second part, disease-related characteristics (presence of chronic disease, regular medication use, physical activity status, characteristic feature, previous MI, knowledge about the disease, angiography, stent or surgical operation) were addressed.

PSS-14 was developed by Cohen et al. (1983).[17] The PSS-14 scale was created to measure the extent to which the individual perceives certain situations in his or her life as stressful.[18] Turkish validity and reliability study of PSS-14 was conducted by Ekin et al.[18] PSS-14, which consists of 14 items, was evaluated as a 5-point Likert type ranging from "Never (0)" to "Very boring (4)." seven of the items containing positive statements were reverse scored. PSS-14 scores range from 0 to 56. A high score indicates that the person perceives too much stress, and a score of 0–35 indicates a normal stress level. The score range of 35–56 indicates that the individual is under stress and cannot cope with stress effectively.

MI dimensional assessment scale: The MIBDS scale was developed by Thompson et al. in 2002.[19] The Turkish validity and reliability study of the scale was conducted by Uysal et al. in 2009.[20] The scale includes 35 items measuring post-MI health status in seven subscales (physical activity, insecurity, emotional reaction, dependency, diet, concern about using medication, and concern about medication side effects). For the answer to each question, the patient was asked to choose the most appropriate answer among the following: "0: Never, 1: Rarely, 2: Sometimes, 3: Often, 4: Always." The total score of each sub-dimension in the scale was converted to 100 using the formula ([Total score from the sub-dimension/highest score that can be obtained from the sub-dimension] ×100). The highest score that can be obtained from the scale is 100, and as the scores increase, the quality of life decreases.

Statistical Analysis

The data of the study were analyzed using SPSS 21 (Statistical Package for Social Sciences, SPSS Inc., Chicago, IL, USA). Descriptive statistics such as frequency, percentage, minimum and maximum values, mean, and standard deviation were used to present the sociodemographic characteristics of the patients, their MI status, and the descriptive features of the PSS-14 and MIBDS used in the study. Normality analysis of the data obtained from the scales was performed using skewness and kurtosis values. Pearson correlation analysis was applied to examine the relationship between quality of life and perceived stress. Whether perceived stress affects the quality of life was examined with Simple Linear Regression Analysis.

Results

The sociodemographic characteristics of the patients participating in the study are presented in Table 1. 69.7% of the patients are male. The average age of the patients is 61.97 years old, the youngest patient is 23 years old and the oldest patient is 93 years old. The average height of the participants is 1.68 m, the average weight is 79.48 kg and the average body mass index is 28.14 kg/m2. 89.7% of the participants are married and 85% have primary education or lower education level. Considering their occupational status, retirees rank first among patients with 44.7%. 51.0% of the patients have less income than their expenses, 79.0% live in the province and 74.6% do not work. Among the patients, the rate of smokers was 43.0% (n=129) and the rate of alcohol users was 14.3% (n=43).

Descriptive characteristics of the patients participating in the study regarding their MI status are presented in Table 2. 39.0% (n=117) of patients had two or more MIs. While 43.7% (n=131)

Table 1. Patients' demographics

Variables	Min-max	Mean	SD
Age	23–93	61.97	13.14
Weight	48–145	79.48	14.28
Hight	1.45–1.90	1.68	0.08
BMI	16.10–43.77	28.14	4.82
	Groups	**f**	**%**
Gender	Female	91	30.3
	Male	209	69.7
Marital status	Married	269	89.7
	Single	31	10.3
Levels of education	Below primary education	44	14.7
	Primary education	211	70.3
	License	43	14.3
	Master's degree	2	0.7
Levels of income	Income equals expenditure	119	39.7
	Income less than expenses	153	51.0
	Income more than expenditure	28	9.3
Employment status	Yes	76	25.3
	No	224	74.6
Occupation	Officer	32	10.7
	Housewife	53	17.7
	Employee	15	5.0
	Retired	134	44.7
	Unemployed	13	4.3
	Other	53	17.7
Living place	Province	237	79.0
	District	36	12.0
	Village/town	27	9.0
Alcohol use	Yes	43	14.3
	No	257	85.7

SD: Standard deviation; BMI: Body mass index.

Table 2. Descriptive characteristics of patients regarding MI status

Variables	Min-max	Mean	SD
Number of MI	One	183	61.0
	Two or more	117	39.0
Chronic disease	Yes	131	43.7
	No	169	56.3
Family history of heart disease	Yes	137	45.7
	No	163	54.3
Angiography	Yes	255	85.0
	No	45	15.0
Stent procedure	Yes	175	58.3
	No	125	41.7
Having surgery due to disease	Yes	59	19.7
	No	241	80.3
Pacemaker (battery) operation	Yes	12	4.0
	No	288	96.0
Receiving education about the disease	Yes	273	91.0
	No	27	9.0
Level of knowledge about the disease	None	11	3.7
	Some	56	18.6
	Adequate	233	77.7
Regular use of medications	Yes	220	73.3
	No	80	26.7
Regular exercise	Yes	76	25.3
	No	224	74.7
Character	Introvert	38	12.7
	Emotional	213	71.0
	Furious	17	5.7
	Stressful	26	8.7
	Depressed	6	2.0
Emotional state after first MI	Anxious	66	22.0
	Furious	10	3.3
	Stressful	203	67.7
	Depressed	20	6.7

SD: Standard deviation; MI: Myocardial infarction.

of the patients had a chronic disease, 45.7% (n=137) had a family history of heart disease. 85% (n=255) of the patients participating in the study had undergone angiography in the past, and 58.3% (n=175) had stent placement. Among the participants, the rate of those who had surgery due to disease in the past was 19.7% (n=59) and the rate of those who had a pacemaker (battery) procedure was 4.0% (n=12). 91.0% (n=273) of the participants received education about the disease, and 77.7% (n=233) thought they had sufficient knowledge about the disease. The majority of the patients, 73.3% (n=220), use their medications regularly. Only 25.3% (n=76) exercise regularly. 71% of the participants (n=213) stated that they had an emotional character. Finally, a significant portion of the patients, 67.7% (n=203), described this process as "stressful" when they had their first MI.

Descriptive statistics regarding the MIBDS scores of the patients participating in the study are presented in Table 3. Patients' physical activity dimension mean score is 30.79±25.68, insecurity dimension mean score is 23.42±20.91, emotional response dimension mean score is 26.70±25.44, addiction dimension mean score is 41.63±20.96, nutrition style dimension mean score is 36.05±32.29, anxiety dimension score about using medication is 36.05±32.29. The mean score of the dimension of concern about drug side effects is 4.83±14.33, the mean score of the dimension of worry about drug side effects is 3.39±12.58, and the mean score of the MIBDS scale is 26.70±16.59. As stated before, the highest score from the total scale and its sub-dimensions can be 100 points, and increasing scores indicate that the health condition is worsening. Accordingly, it can be said that the general quality of life of the patients participating in the study and their quality of life regarding physical activity, insecurity, emotional response, addiction, and nutrition are at a "medium" level, whereas their concerns about drug use and drug side effects are quite low.

Descriptive statistics regarding the participants' PSS scores are presented in Table 4. The mean score of the patients in the Inadequate Self-Efficacy Perception dimension is 9.20±6.18, the mean score of the Perception of Stress/Discomfort dimension is 11.67±4.07, and the total score average of the PSS scale is 20.87±8.67. As explained before, participants can get a maximum of 70 points from the total scale and 35 points from each of its subscales, and a high score indicates the excess stress perceived by the individual. Accordingly, it is possible to say that the stress perceived by the participants in general and sub-dimensions is at a "normal" level.

Table 3. Distribution of MIBDS scale total and sub-dimension mean scores

Variables	Min-max	Mean±SD
Physical activity	0–95.83	30.79±25.68
Insecurity	0–100	23.42±20.91
Emotional response	0–100	26.70±25.44
Dependence	0–100	41.63±20.96
Diet	0–100	36.05±32.29
Anxiety about using medication	0–100	4.83±14.33
Concern about medication side effects	0–87.50	3.39±12.58
MIBDS total	0.71–81.43	26.70±16.59

MIBDS: MI dimensional assessment scale; SD: Standard deviation.

Table 4. Distribution of PSS scale total and sub-dimension mean scores

Variables	Min-max	Mean±SD
Perception of insufficient self-efficacy	0.00–28.00	9.20±6.18
Perception of stress/discomfort	2.00–25.00	11.67±4.07
PSS total	2.00–42.00	20.87±8.67

PSS: Perceived stress scale.

The results of the correlation analysis for the relationship between the quality of life and perceived stress levels of the patients participating in the study are presented in Table 5. There is a moderate and positive significant relationship between the patients' PSS scale total score and MIBDS scale total score ($r=0.656$; $p<0.01$). Since the increase in MIBDS scale scores indicates a decrease in the quality of life, it is possible to say that there is a negative relationship between the participant's quality of life after MI and the stress they perceive.

Whether perceived stress is an important variable affecting the quality of life of patients after MI was examined by simple linear regression analysis. Accordingly, simple linear regression assumptions were checked before the analysis. In regression analysis, both the dependent variable quality of life, and the independent variable perceived stress are continuous variables. Whether the variables in question had a normal distribution was examined through skewness and kurtosis values. Skewness and kurtosis values were determined as 0.448 and −0.805 for the perceived stress variable, and 0.635 and −0.09 for the quality of life variable. Since the obtained skewness and kurtosis values were within ±2, it was evaluated that both variables showed normal distribution. In the examination of the linearity of the relationship between the dependent and independent variables, it was determined that there was a linear relationship between both variables. In this context, after it was seen that the regression analysis assumptions before the analysis were met, simple linear regression analysis was applied and the analysis result is shown in Table 6.

Within the framework of the regression analysis findings in Table 6, it is seen that the model as a whole is significant based on the F value ($p < 0.05$). In addition, when the t value of the independent variable in the model was examined, it was determined that the variable in question was significant within the model.

The adjusted R2 value, which indicates what percentage of the dependent variable can be explained by the independent variable,

Table 5. Correlation analysis for the relationship between perceived stress and quality of life

	MIBDS total
PSS total	
r	0.656
p	0.000

Table 6. Simple linear regression analysis on the effect of perceived stress on quality of life

Dependent variable	Independent variable	B	Se.	β	t	p
Life quality	Constant	0.564	1.889		0.299	0.766
	Perceived stress	1.255	0.084	0.656	15.010	0.000

$F_{(1-298)}$: 225.313; $p \leq 0.05$; R^2: 0.431; Ad. R^2: 0.429. B: Regression coefficient; Se.: Standart error; t: t-test.

was determined as 0.429. Accordingly, it is possible to say that 42.9% of the quality of life can be explained by perceived stress. In addition, since the sign of the standard beta coefficient of the independent variable is positive and a high score indicates poor quality of life in the study, it can be said that perceived stress has a negative effect on the quality of life in patients with MI and as perceived stress increases, the quality of life decreases in patients.

Discussion

This study aimed to determine the effect of perceived stress on quality of life in patients with MI. Data were obtained from 300 adult patients who applied to the adult outpatient clinic of Istanbul Kartal Koşuyolu Heart Hospital between January and June 2021. It is understood that there is a positive, moderately significant relationship between the quality of life and perceived stress levels of the MI patients participating in the study. In other words, as the stress perceived by patients increases, their quality of life decreases. In the specified regression model, it is understood that 42.9% of the quality of life can be explained by perceived stress. This finding can be interpreted as almost half of the quality of life of MI patients depends on their perceived stress. Therefore, it is understood that the stress perceived by MI patients plays an important role in determining their quality of life. Previous research in the literature also supports this finding. In the study conducted by Koçoğlu and Akın examining the effects of income inequalities on healthy lifestyle behaviors and quality of life, it was observed that as individuals' stress management levels increase, their quality of life also increases.[21] Likewise, in the study conducted by Bayrak Özarslan examining the relationship between healthy lifestyle and quality of life levels of diabetic coronary artery patients, it was observed that as the stress management levels of the patients increased, their quality of life increased.[22] In the study conducted by Yel and Ünsar examining the quality of life and anxiety levels of coronary angiography patients, it was observed that there was a significant negative relationship between the patients' quality of life and their anxiety levels, and as the patient's quality of life increased, their perceived anxiety levels decreased.[23] When the studies were evaluated, it was determined that the quality of life of patients was negatively affected by the

level of stress they perceived. In this regard, it is thought that the research finding is supported by previous research.

Conclusion

In this study, which examined the effect of the perceived stress level of patients diagnosed with MI on their quality of life, it was found that there was a significant negative relationship between the patients' perceived stress level and their quality of life. It is understood that as the perceived stress level of MI patients increases, their quality of life decreases and 42.9% of the patients' quality of life is determined by their perceived stress level. Therefore, it is of great importance to reduce the level of stress perceived by patients to increase their quality of life. In this regard, it is recommended that psychosocial factors affecting the quality of life of patients be identified and evaluated. In addition, support programs should be developed to reduce the level of stress perceived by patients. Likewise, to facilitate the disease management of patients, health services should be provided by a team consisting of different disciplines.

This research was limited only to patients who came to the adult cardiology outpatient clinic of Istanbul Kartal Koşuyolu High Specialization Training and Research Hospital. To increase the representativeness of the findings obtained, the research can be repeated with regional and then national participants. Likewise, the findings obtained were discussed cross-sectionally. Although it is seen that the perceived stress level has a significant effect on determining the quality of life of patients, it is predicted that this effect may decrease with support programs that can be given, so repeating the research using experimental methods will make significant contributions to the relevant literature.

Disclosures

Ethics Committee Approval: The study was approved by the İstanbul Okan University Non-invasive Clinical Research Ethics Committee (no: 2020/2, date: 19/02/2020).

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References

1. Reed GW, Rossi JE, Cannon CP. Acute myocardial enfarction. Lancet 2017;389:S197–210. DOI: 10.1016/S0140-6736(16)30677-8.
2. Sağlık Bakanlığı TC. Türkiye Halk Sağlığı Kurumu. In: Türkiye Kalp ve Damar Hastalıkları Önleme ve Kontrol Programı 2015–2020, Ankara.
3. Hawkes AL, Patrao TA, Ware R, Atherton JJ, Taylor CB, Oldenburg BF. Predictors of physical and mental health-related quality of life outcomes among myocardial infarction patients. BMC Cardiovasc Disord 2013;13(69):S1–9. DOI: 10.1186/1471-2261-13-69.
4. Coşkun S, Tanrıverdi F, Yavuz G, Yavuz S. Kardiyovasküler aciller. İçinde: In: Yavuz S, Yavuz G, editors. Paramedikler için Hastane Öncesi Acil Tıp. Ankara: Nobel Tıp Kitabevleri; 2017. p. 327–71.
5. Eroğlu Aygül S. Miyokard Infarktüsü Geçiren Bireylere Uygulanan Eğitim Programının Kardiyak Risk Faktörleri ve Yaşam Kalitesi Üzerine Etkisi (Tez). Isparta: Süleyman Demirel Üniversitesi; 2019.
6. WHO. Bulaşıcı Olmayan Hastalıkların Önlenmesi ve Kontrolüne İlişkin Küresel Eylem planı. Erişim Tarihi; 2019. Available from: https://apps.who.int/iris/bitstream/handle/10665/148114/9789241564854_eng.pdf;jsessionid=41A46299CB23E869338A90D5C6181A41?sequence=1. Accessed Jul 8, 2024.
7. James SK, Atar D, Badano LB, Blömstrom-Lundqvist C, Borger MA, Mario CD, et al. ST-segment yükselmeli akut miyokart enfarktüsü ile başvuran hastaların tedavisine ilişkin ESC kılavuzu. Turk Kardiyol Dern Ars 2013;supp 3 S1–51.
8. Dural G, Çıtlık Sarıtaş S. Miyokard infarktüsünde ev tabanlı eğitim ve yaşam kalitesi. J Cardiovasc Nurs 2017;8(17):S86–94. DOI: 10.5543/khd.2017.04796.
9. Akçay Fırat F, Dedeli Ö. Miyokart infarktüsü geçiren hastalarda umutsuzluk ve yaşam kalitesinin değerlendirilmesi. J Cardiovasc Nurs 2016;7:S153–61. DOI: 10.5543/khd.2016.72792.
10. Oflazoğlu M. Akut Koroner Sendrom Geçiren Hastalarda Fonksiyonel Kapasite, Günlük Yaşam Aktiviteleri Ve Yaşam Kalitesinin Değerlendirilmesi (Tez). Ankara: Hacettepe Üniversitesi Sağlık Bilimleri Enstitüsü; 2018.
11. Azmi S, Goh A, Fong A, Anchah L. Quality of life among patients with acute coronary syndrome in Malaysia. Value Health Reg Issues 2015;6:S80–3. DOI: 10.1016/j.vhri.2015.03.015
12. Dural G, Çıtlık Sarıtaş S. Quality of life in patients with acute coronary syndrome and affecting factors. J Cardiovasc Nurs 2017;8(17):S131–41. DOI: 10.5543/khd.2017.65265.
13. Dülek H, Tuzcular Vural Z, Gönenç I. Risk factors in cardiovascular diseases. J Turk Fam Phy 2018;9(2):S53–8. DOI: 10.15511/tjtfp.18.00253.
14. Perk J, De Backer G, Gohlke H, Graham I, Reiner Z, Verschuren M, et al. ESC kılavuzları, Avrupa klinik uygulamada kardiyovasküler hastalıklardan korunma kılavuzu (Versiyon 2012). Türk Kardiyol Derneği Arşivi 2012;40(3):S1–76.
15. Karakoç Kumsar A, Taşkın Yılmaz F. Kardiyovasküler hastalıklar risk faktörlerinden korunmada hemşirenin rolü. Türk Sağlık Bilimleri Derg 2017;4(2):S18–27. DOI: 10.26453/otjhs.338014.
16. Alkan H. Hasta eğitimi ve davranış değişikliği geliştirme. J Cardiovasc Nurs 2016;7(2):S41–7. DOI: 10.5543/khd.2016.29591.
17. Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. J Health Soc Behav 1983;24(4):385–96.
18. Ekin M, Harlak H, Demirkıran F, Dereboy C. The adaptation of the perceived stress scale into Turkish: a reliability and validity analysis. New/Yeni Sympos J 2013;51(3):S132–40.
19. Thompson DR, Jenkinson C, Roebuck A, Lewin RJ, Boyle RM, Chandola T. Development and validation of a short measure of health status for individuals with acute myocardial infarction: the myocardial infarction dimensional assessment scale (MIDAS). Qual Life Res 2002;11(6):535–43. doi: 10.1023/a:1016354516168.
20. Uysal H, Özcan Ş, Enç N. Adaptation of myocardial infarction dimensional assessment scale to turkish: a validity and reliability study. Arch Turk Soc Cardiol 2009;37(8):S543–50.
21. Koçoğlu D, Akın B. Sosyoekonomik eşitsizliklerin sağlıklı yaşam biçimi davranışları ve yaşam kalitesi ile ilişkisi. Dokuz Eylül Üniv Hemşirelik Yüksekokulu Elektronik Derg 2009;2(4):S145–54.
22. Bayrak Özarslan B. Diyabetik Koroner Arter Hastalarında Sağlıklı Yaşam Biçimi Davranışları ve Yaşam Kalitesinin Belirlenmesi (Tez). Ankara: Hacettepe Üniversitesi Sağlık Bilimleri Enstitüsü; 2013.
23. Yel P, Ünsar S. Quality of life and anxiety levels of patients with coronary angiography. Kardyovask Hemşirelik Derg 2020;11(24):S7–15. DOI: 10.5543/khd.2020.65477.