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ORIGINAL PAPER

Determination of Hopelessness and Quality of Life in Patients with Heart Disease: An Example from Eastern Turkey

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Abstract This descriptive study was undertaken in order to determine hopelessness and quality of life among the patients with heart disease. No sampling was made, and 200 patients who were voluntary and were able to communicate were included in the study. The data of the study were collected using a personal information form that involved questions about patients' descriptive information and their diseases, Beck Hopelessness Scale and SF-36 Quality of Life Scale with a face-to-face interview technique. For the analyses of the data, percentages, means, *t* test, Kruskal–Wallis and Pearson's correlation analyses were used. It was identified 54% of them was male patients. It was seen that there were significant between income status and general health perceptions, hopelessness; and between health perceptions and vitality, general health perceptions, global quality of life, hopelessness ($p < .05$). It was also explored that there was a negative correlation between hopelessness levels of the cardiac patients and functioning status, general health perceptions and global quality of life. It was determined that the desperation levels of the patients were above the middle level, and the quality of life was low.

Keywords Patients with heart disease · Hopelessness · Quality of life · Nursing

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Introduction

Cardiovascular diseases are globally main cause of death, and it is estimated that they will continue to be the most important cause of death for a while. According to the data of the World Health Organization (WHO), it is reported that 17.5 million people died of cardiovascular diseases in 2005, which constituted 30% of all global deaths. 80% of these deaths occurred in low-income and middle-income countries. In Turkiye, of the primary mortality causes on national scale, cardiovascular diseases rank first with a number of 205.457 deaths (47.3% of all death causes) (T.C. Ministry of Health 2010).

Hope is a significant term to be taken into consideration in health and illness. Hope is—in the general sense—the expectation of something that is desired and wanted. As for hopelessness, it is an emotional state in which people possess no individual options to solve problems or to achieve what is desired and become unable to use their energy in order to attain objectives. Hope is felt as a power that exists in people, makes them act to change the current situation and helps them dream of a better tomorrow both for themselves and others (Öz 2004). According to Kavradım and Özer (2014), it is known that hope which is important in supporting positive thought and improving physical and psychological well-being increases quality of life (Kavradım and Özer 2014; McClement and Chochinov 2008; Kelleci 2005; Akman and Korkut 1993; Felder 2004; Vellone et al. 2006).

When positive and negative sides of quality of life are approached together, they are related to how people perceive their positions in life in relation with their culture and value systems, objectives, expectations, standards and anxieties. Quality of life, which is a broad term that bonds people's physical health, psychological state, independence level, social relations, personal beliefs and specific characteristics of the environment all together in a complex way, is defined as a "subjective well-being" of a patient (T.C. Ministry of Health 2011; Aslan 2012; WHO 1996; Öksüz and Malhan 2005). Congestive heart failure is an important health problem that is manifested with hopeless prognosis and increased incidence and is often accompanied with restricted physical activities and serious complaints in different areas of quality of life (Wielenga et al. 1997; Coelho et al. 2005).

Background

Cardiovascular diseases are significant health problems due to prevalence and high mortality rates, deteriorated quality of life, negative outcomes on social and economical scales (Labarthe 2010; Demir and Özer 2014). These diseases affect people's important health dimensions in social and personal relations, professional relations and daily activities (Demir and Özer 2014). With the increasing worldwide incidence and prevalence, cardiovascular diseases have been expanding in an unlimited way (Crowder 2009).

The importance of advancing quality of life has been emphasized more in terms of promotion and improvement of health as well as prevention of diseases (T.C. Ministry of Health 2011). Cardiovascular diseases affect people at their middle ages, make them dependent on family members and disable them during the most productive years and as a result damage the economy of the developing countries (Crowder 2009). Also cardiovascular diseases produce a low quality of life and thus increases hopelessness level of the cardiac patients because quality of life makes people perceive that their needs are met and opportunities to attain happiness and satisfaction are not spared from them regardless of

their physical, social and economical conditions (T.C. Ministry of Health 2011). Nurses bear important responsibilities in enhancing the quality of life of cardiac patients and informing them about their diseases. Informing the patients about their diseases will also result in low hopelessness level because hope is felt as a power that exists in people, makes them act to change the current situation and helps them dream of a better tomorrow both for themselves and others (Öz 2004). Therefore, a hopeful individual demonstrates an increased quality of life.

In literature, it is emphasized that spirituality and spiritual peace, quality of life shaped with values and beliefs, self-esteem, family unity and social support, personal freedom and hope are all mutually interrelated in order to cope with the ambiguities caused by diseases and life (Öz 2004). When the studies done with cardiac patients are examined, it is seen that patients undergo hopelessness and hopelessness affects the level of their quality of life negatively and thus deteriorates their quality of life considerably (Juenger et al. 2002; Öz 2006; Kangelaris et al. 2010; Bekelman et al. 2010; Bahadır Yılmaz and Ergun 2010).

Nurses bear important responsibilities in preventing prevalence and complications of cardiovascular diseases at the hospital as well as in improving recovery skills of the patients (Crowder 2009). The aim of a nurse who serves the cardiac patients should be to provide physical and mental relaxation in order to reduce their cardiac burden, to optimize their cardiopulmonary functions, etc. (Karadeniz 2008; Turkish Society of Cardiology 2007). Nurses can make a difference by assessing nursing interventions and the relevant outcomes both at home and hospital. Providing care for the cardiac patients will not only reduce mortality and morbidity but also facilitate achievement of better outcomes by increasing patients' quality of life (Keresztes and Wcisel 2009). Nurses play important roles in discovering and supporting patients' hope and enhancing their quality of life.

The aim of the current study was to determine whether or not hopelessness level and quality of life of the cardiac patients differed in terms of sociodemographic and disease-related variables.

Methods

Population and Sample

The population of this descriptive study was composed of inpatient cardiac patients who were treated at Internal Medicine Clinic-I of Mengücek Gazi Training and Research Hospital of Erzincan University between July 2012 and January 2013. The sample of the study consisted of those patients who were diagnosed with cardiac arrhythmia, cardiovascular diseases, structural cardiac disorders and cardiac insufficiency. Two hundred patients who were voluntary, able to communicate, had no hearing impairment and no diagnosed psychiatric disorders were recruited as the sample of the study. The data of the study were gathered using personal information form designed by the authors to explore descriptive characteristics and disease-related characteristics of the patients, Beck Hopelessness Scale and SF-36 Quality of Life Scale through a face-to-face interview technique. Data collection lasted for 20–25 min averagely.

Data Collection Tools

Personal Information Form

The form included a total of 12 questions about patients' sociodemographic characteristics and disease-related characteristics (age, gender, marital status, educational status, employment status, economical status, level of perception of health status, person with whom they lived, presence of somebody from whom the patients asked for help, previous heart attacks, presence of other diseases and disease duration).

Beck Hopelessness Scale

Beck Hopelessness Scale (BHS) was developed by Beck et al. in 1974 (Beck et al. 1974). The scale consists of twenty true/false questions (11 true and 9 false questions). It is expected that respondents give answers concordant with the scoring key [yes for 11 questions (2, 4, 7, 9, 11, 12, 14, 16, 17, 18, 20th questions); no for 9 questions (1, 3, 5, 6, 8, 10, 13, 15, 19th questions)]. It is a self-report inventory. Each response concordant with scoring key is scored with one point, while those responses non-concordant with scoring key are scored with zero point. Scores are added up to get the arithmetic total scores, and this total score is accepted as "Hopelessness Score." Scores range between 0 and 20, 1, 6, 13, 15, 19th questions are related to feeling about the future; 2, 3, 9, 11, 12, 16, 17, 20th questions to loss of motivation; and 4, 7, 8, 14, 18th questions to future expectations. The questions are composed of emotional, motivational and cognitive factors. The scale which measures quantitatively an important psychological sign like hopelessness is short, reliable and easy to administer. The reliability and validity tests of the scale were conducted by Seber et al. (1993). High scores indicate that level of hopelessness is high (Seber 1991; Seber et al.1993). In the study of Seber et al. (1993) (Seber et al. 1993), Cronbach's alpha reliability coefficient was .86. In the current study, it was .66.

SF-36 Quality of Life Scale

The scale developed by Ware in 1987 was designed in order to be used in clinical practices and studies, to assess health policies and to be used in studies on general population. Quality of life of all the patients is assessed with SF-36 Quality of Life Scale (Ware and Sherbourne 1992). SF-36 Quality of Life Scale is a Likert scale composed of 4 major health areas (physical function, vitality, perception of general health and global quality of life) with 36 statements and measures nine health concepts. There are a total of 9 questions on the scale, and each issue has different numbers of items. Scores of each subscale vary from 0 to 100. 0 represents the worst quality of life, and 100 the best quality of life.

The reliability and validity tests of the scale were done by Pınar (1995) (Pınar 1995). The scale was used with patients with such chronic diseases as cardiac, hemodialysis-related, diabetic, etc. In the study of Pınar done with cardiology patients, Cronbach's alpha value was .95 (Pınar 1995), whereas in the current study, it was .80.

Ethical Suitability

In order to undertake the study, the ethical suitability of the research was approved by Ethical Council of the Medical Science Institute of Erzincan University and the necessary written official permissions from the management of Mengücek Gazi Training and Research Hospital of Erzincan University were obtained. The participants were thoroughly instructed in the aims and details of the study, their oral informed consents were obtained and they were assured of confidentiality (Principle of confidentiality).

Statistical Analysis

The statistical analyses were done with SPSS (Statistical Package for Social Science for Windows) 15.0. For the analyses of the data, percentages, means and t test, Kruskal–Wallis and Pearson's correlation analyses were used. Results were considered significant at $p < .05$.

Results

It was found out that mean age of the participant subjects was 69.90 ± 11.37 years, 54% of them were male patients, 55% of them were illiterate, 78.5% of them were married, 52.5% of them had bad/unsatisfactory economic condition, 56% of them perceived their health status as moderate, 59% of them lived together with their spouses, 82.5% of them had someone whom they could ask for help, 67.5% of them had previous heart attacks, disease duration of 31% of them was between 6 and 10 years and 80% of them had another disease apart from cardiac disease (Tables 1, 2).

It was seen that there was positive correlation between patients' ages and hopelessness level while a negative correlation between patients' ages and quality of life. As mean age of the patients increased so did their hopelessness level but not their quality of life. It was determined that the desperation levels of the patients were above the middle level and the quality of life was low (Table 1).

It was noted that there was a difference between patients' educational status and physical function, vitality, global quality of life, hopelessness; and between patients' income status and perception of general health and hopelessness ($p < .05$, $p < .01$) (Table 1).

It was found out that there was significant difference between level of perception of health status of cardiac patients and vitality, perception of general health, global quality of life and hopelessness; between the person with whom they lived, presence of somebody whom the patients asked for help and perception of general health; between disease duration and global quality of life; and between presence of other diseases and physical function ($p < .05$, $p < .01$, $p < .001$, $p < .05$) (Table 2).

It was found out that patients' mean hopelessness score was high (11.01 ± 3.10) while their quality of life score was low (40.47 ± 9.31) (Table 3).

It was seen that there was a negative correlation between hopelessness level of cardiac patients and global quality of life, physical function and perception of general health; in other words, as hopelessness level of the patients increased their quality of life decreased (Table 4).

Table 1 Distribution of the patients' scores of hopelessness scale and quality of life scale according to their descriptive characteristics ($n = 200$)

Descriptive characteristics	Number (%)	Beck hopelessness scale	KW/t p	Quality of life							
				Physical function	KW/t p	Vitality	KW/t p	Perception of general health	KW/t p	Global quality of life	KW/t p
Age (Average ± Sd: 69.90 ± 11.37)		$r = .195$		$r = -.207$		$r = -.177$		$r = -.152$		$r = -.262$	
(min:22, max:95)		**$p = .006$**		**$p = .003$**		**$p = .012$**		**$p = .032$**		**$p = .000$**	
Gender											
Male	108(54.0)	10.73 ± 3.18	−1.373	32.05 ± 8.99	.718	39.95 ± 10.30	1.231	46.96 ± 14.38	.443	40.86 ± 8.99	.651
Female	92 (46.0)	11.33 ± 2.99	.178	31.22 ± 6.99	.474	38.04 ± 11.64	.220	46.09 ± 13.42	.658	40.00 ± 9.71	.516
Educational status											
Illiterate	110 (55.0)	11.63 ± 2.86	12.807	30.64 ± 6.51	11.532	38.12 ± 10.84	11.591	45.15 ± 14.01	4.626	39.36 ± 9.58	10.509
Literate	48 (24.0)	10.02 ± 2.78	**.012**	31.58 ± 8.93	**.021**	40.46 ± 10.91	**.021**	46.58 ± 13.55	.328	40.42 ± 9.25	**.033**
Primary school	25 (12.5)	10.16 ± 4.12		31.28 ± 6.61		36.84 ± 9.91		52.80 ± 26.04		42.24 ± 7.51	
Secondary school	5 (2.5)	12.60 ± 2.07		34.40 ± 11.69		37.40 ± 13.07		48.58 ± 12.23		41.60 ± 15.44	
High school + University	12 (6.0)	10.33 ± 3.23		41.08 ± 13.32		47.67 ± 10.40		46.56 ± 13.92		46.58 ± 4.91	
Marital status married/ single/divorced/ widow	157 (78.5)	10.89 ± 3.20	−1.042	32.11 ± 9.95	2.546	38.75 ± 11.06	−.798	46.25 ± 13.89	−.604	40.23 ± 9.37	−.683
	43 (21.5)	11.44 ± 2.70	.299	31.40 ± 6.86	**.012**	40.26 ± 10.59	.426	47.70 ± 14.13	.547	41.33 ± 9.15	.495
Employment Status											
Employed	74 (37.0)	11.11 ± 2.95	.359	32.00 ± 3.08	.590	40.34 ± 10.70	1.252	45.16 ± 13.45	−1.089	39.97 ± 8.62	−.572
Unemployed	126 (63.0)	10.94 ± 3.20	.720	31.24 ± 7.12	.556	38.33 ± 11.06	.212	47.38 ± 14.17	.278	40.75 ± 9.72	.568
Economical status											
Unsatisfactory	105 (52.5)	11.74 ± 2.95	13.367	31.43 ± 8.99	.635	38.02 ± 9.64	11.818	44.40 ± 14.69	22.745	39.28 ± 9.16	21.947
Moderate	92 (46.0)	10.28 ± 3.03	**.001**	31.84 ± 7.07	.728	40.17 ± 12.26	**.003**	48.39 ± 12.45	**.000**	41.54 ± 9.38	**.000**

Table 1 continued

Descriptive characteristics	Number (%)	Beck hopelessness scale	KW/t *p*	Quality of life							
				Physical function	KW/t *p*	Vitality	KW/t *p*	Perception of general health	KW/t *p*	Global quality of life	KW/t *p*
Satisfactory	3 (1.5)	7.33 ± 4.04		34.67 ± 8.96		42.33 ± 10.97		66.00 ± 5.29		49.00 ± 5.57	

Bold values indicate statistical significance

Table 2 Distribution of the patients' scores of Hopelessness Scale and Quality of Life Scale according to their disease-related characteristics ($n = 200$)

Descriptive characteristics	Number (%)	Beck Hopelessness Scale	KW/t *p*	Quality of life							
				Physical function	KW/t *p*	Vitality	KW/t *p*	Perception of general health	KW/t *p*	Global quality of life	KW/t *p*
Level of perception of health status											
Satisfactory	19 (9.5)	8.68 ± 3.59	13.367	31.95 ± 6.20	.635	43.53 ± 9.50	11.818	55.63 ± 12.58	22.745	46.42 ± 5.97	21.941
Moderate	112 (56.0)	10.89 ± 3.13	**.001**	31.46 ± 8.41	.728	39.88 ± 10.24	**.003**	48.65 ± 13.08	**.000**	41.29 ± 8.28	**.000**
Unsatisfactory	69 (34.5)	11.83 ± 2.57		31.91 ± 8.22		36.55 ± 11.94		40.67 ± 13.42		37.49 ± 10.61	
Person with whom the patients lived together											
Alone	38 (19.0)	11.47 ± 2.69	.715	32.61 ± 8.75	.663	39.39 ± 9.39	1.300	38.45 ± 11.81	10.756	37.82 ± 10.34	1.945
Spouse	118 (59.0)	10.81 ± 3.09	.490	31.77 ± 7.35	.516	39.84 ± 11.52	.275	47.19 ± 12.82	**.000**	41.19 ± 9.15	.146
Spouse and siblings	44 (22.0)	11.14 ± 3.46		30.57 ± 9.52		36.75 ± 10.52		51.89 ± 15.53		40.80 ± 8.60	
Presence of somebody whom the patients can ask for help											
Yes	165 (82.5)	10.99 ± 3.24	−.169	31.44 ± 7.78	−.863	39.01 ± 10.53	−.176	47.89 ± 13.33	2.994	40.87 ± 8.25	1.327
No	35 (17.5)	11.09 ± 2.37	.866	32.74 ± 9.65	.389	39.37 ± 12.91	.861	40.29 ± 15.11	**.003**	38.57 ± 13.24	.186
Previous heart attacks											
Yes	135 (67.5)	11.10 ± 2.83	.599	31.39 ± 8.30	−.682	39.30 ± 11.07	.425	45.56 ± 13.72	−1.464	39.94 ± 9.74	−1.148
No	65 (32.5)	10.82 ± 3.62	.550	32.23 ± 7.78	.496	38.60 ± 10.76	.671	48.63 ± 14.21	.145	41.55 ± 8.32	.252
Disease duration											
Shorter than 1 year	33 (16.5)	9.88 ± 3.19	6.048	33.94 ± 9.03	4.360	40.00 ± 12.27	2.834	48.15 ± 13.97	5.993	42.55 ± 6.91	8.101
1–5 years	63 (31.5)	11.25 ± 3.23	.109	32.02 ± 8.35	.225	40.68 ± 11.11	.418	49.35 ± 14.23	.112	41.98 ± 9.01	**.044**
6–10 years	62 (31.0)	10.98 ± 2.88		30.47 ± 7.71		38.44 ± 11.32		45.19 ± 13.04		39.61 ± 10.24	
≥11 years	42 (21.0)	11.55 ± 3.05		31.12 ± 7.48		36.88 ± 8.75		43.14 ± 14.14		37.81 ± 9.47	

Table 2 continued

Descriptive characteristics	Number (%)	Beck Hopelessness Scale	KW/t *p*	Quality of life							
				Physical function	KW/t *p*	Vitality	KW/t *p*	Perception of general health	KW/t *p*	Global quality of life	KW/t *p*
Presence of other diseases											
Yes	160(80.0)	11.02 ± 3.04	.125	31.04 ± 7.79	−2.205	38.69 ± 10.90	−.985	46.54 ± 14.11	−.046	40.07 ± 9.61	−1.205
No	40 (20.0)	10.95 ± 3.39	.901	34.18 ± 9.44	**.029**	40.60 ± 11.16	.326	46.65 ± 13.32	.964	42.05 ± 7.91	.230

Bold values indicate statistical significance

Table 3 Distribution of the patients' mean scores of hopelessness scale and quality of life scale ($n = 200$)

Quality of life	$\overline{X} \pm Sd$
Physical function	31.67 ± 8.13 (min = 20, max = 74)
Vitality	39.08 ± 10.95 (min = 16, max = 85)
Perception of general health	46.56 ± 13.92 (min = 18, max = 85)
Global quality of life	40.47 ± 9.31 (min = 14, max = 80)
Hopelessness	11.01 ± 3.10 (min = 2, max = 18)

Table 4 Correlation between hopelessness and quality of life ($n = 200$)

Quality of life scale	Beck hopelessness scale	
	r	*p*
Physical function	−.162	.022*
Vitality	−.104	.142
Perception of general health	−.190	.007*
Global quality of life	−.197	.005*

* $p < .05$

Discussion

Cardiovascular diseases are important health problems that affect individuals physically, socially and emotionally. Death rate of cardiac diseases continues to rank first despite all preventive and therapeutic advancements and novel methods (Turkish Society of Cardiology 2007). The current study was done to determine the effect of sociodemographic and disease-related variables upon hopelessness level and quality of life of the cardiac patients.

It was found out that the average age of the participants was 69.90 ± 11.37 years and that hopelessness level increased as age advanced and as a result their quality of life reduced. In different studies done with cardiac patients and inpatient patients, it was reported that most of the patients were aged ≥60 years (Crowder 2009; Bahadır Yılmaz and Ergun 2010; Onat 2010; Demirsoy and Taşkıran, 2010; Petrie 2004; İlerigelen 2010), as age increased so did their hopelessness level (Öz 2006; Arslantaş et al. 2010) but their quality of life reduced (Küçükberber et al. 2011; Hall and Chyun 2013; Mendes de Leon et al. 2009; Demir 2008; Erdem and Ergüney 2005; Yıldırım and Atalay 2002). Chronic diseases like cardiovascular diseases (coronary artery diseases, hypertension and dyslipidaemia) limit and affect quality of life of the elderly people negatively (Hall and Chyun 2013). Of the chronic diseases seen often during old age, it is cardiac diseases that affect physical and psychological functions most (Demirsoy and Taşkıran 2010). When the literature is analyzed, it is reported that elderly cardiac patients are both physically and psychologically affected negatively, which results in a decreased quality of life and an increased hopelessness level. In the current study, it was an expected outcome that hopelessness level of the patients increased as age advanced and their quality of life reduced because most of the patients were elderly.

It was noted that there was no statistically significant difference between gender and hopelessness, quality of life of the patients ($p > .05$), but hopelessness level of the male patients was lower and their quality of life was higher than female patients. Similar to our study results, the studies done (Arslantaş et al. 2010; Tan et al. 2005) point out that gender does not affect mean hopelessness scores and the studies conducted with cardiac patients emphasize that mean scores of quality of life of the male patients are higher than female

patients (Küçükberber et al. 2011; Mendes de Leon et al. 2009; Demir 2008; Erdem and Ergüney 2005; Dilek et al. 2010).

It was detected that a significant difference existed between educational status and hopelessness level, physical function, vitality, global quality of life ($p < .05$). Educational status and mean hopelessness scores of the patients differed, and in terms of educational status, mean scores of physical function, vitality, global quality of life were higher among those who had high school degree and university degree. In the study of Arslantaş et al. (2010), it is indicated that mean hopelessness scores of those who were illiterate and literate were higher as compared with those with primary school degree and above. In another study, too, it is pointed out that mean hopelessness scores of those who had university degree were lower than other educational degrees (Tan et al. 2005). Similar to our study results, in the studies done with cardiac patients (Küçükberber et al. 2011; Mendes de Leon et al. 2009; Demir 2008; Erdem and Ergüney 2005; Dilek et al. 2010), it is also reported that as educational level increases so does quality of life.

In the current study, it was found out that mean hopelessness scores of the married patients were lower and a significant difference was found between marital status and physical function ($p < .05$). According to the study of Arslantaş et al. (2010), it was demonstrated that mean hopelessness scores of the widowed patients were higher than married and single patients.

Among the hemodialysis patients, the difference between marital status and mean hopelessness scores was statistically insignificant too (Tan et al. 2005). When the studies on quality of life were examined in terms of marital status, it was found out that mean scores of quality of life were higher among the married patients who had cardiovascular diseases than single patients (Küçükberber et al. 2011; Mendes de Leon et al. 2009; Dilek et al. 2010). In another study, it was also detected that scores of quality of life among the married patients were higher than widowed patients (Demir 2008).

Cardiovascular diseases affect people's professional life first (Öksüz and Malhan 2005). It was detected that no significant difference existed between the employed patients and unemployed patients in terms of hopelessness level and quality of life ($p > .05$), and hopelessness level of the employed patients was higher but their global quality of life was lower. Findings of the study of Arslantaş et al. (2010) were similar to our study findings, whereas findings of the studies of Tan et al. (2005) and Savaşan et al. (2013) were not similar to our study findings. Likewise, when the studies on quality of life which produced dissimilar findings to ours were examined, it was found out that employed patients had higher quality of life (Küçükberber et al. 2011; Erdem and Ergüney 2005). We were of the opinion that for these patients, physical and environmental conditions at work might have affected their emotional status and disease-related outcomes.

The literature states that the significance and importance of hope are associated with the meaning one attributes to life and his financial capacity because nature and change of personal hope focuses on individuals' entire life and hope people with psychological health problems possess has been correlated with their life conditions (Öz 2004). Having satisfactory life conditions produces a better quality of life, which will increase hope. It was noted that there was a significant difference between economical status and hopelessness, vitality, perception of general health and global quality of life ($p < .01$, $p < .001$) and that those with bad/unsatisfactory economic status had high level of hopelessness and low level of quality of life. Findings obtained from studies with different patient groups (Arslantaş et al. 2010; Küçükberber et al. 2011; Demir 2008; Erdem and Ergüney 2005) concurred with the current study.

It was detected that statistically significant difference existed between level of perception of health status and hopelessness, vitality, perception of general health and global quality of life ($p < .01$, $p < .001$). Hopelessness level of those who perceived their own health status as bad/unsatisfactory was higher, and their quality of life was lower. In a study done with patients with cardiac insufficiency, it was noted that patients told that they were satisfied with the health-related areas of quality of life although they reported some restrictions in physical functions. It was seen that there was no significant difference between the treatment patients received and their quality of life (Grady et al. 2014). On the individual scale, we can improve quality of life of the patients with chronic diseases and its functions with an optimal self-care. Nurses should be aware of the barriers met by patients with chronic diseases (Baumann and Dang 2012).

It was detected that hopelessness level of those who lived alone was higher and their quality of life was lower. It was seen that there was a significant difference between person with whom the patients lived together and perception of general health ($p < .001$). In the study of Dilek et al. (2010) conducted with the patients with coronary artery disease, it was reported that quality of life was higher among those who lived with spouses and children and other family members than those who lived alone at home. Literature emphasizes that spirituality and spiritual peace, quality of life shaped with values and beliefs, self-esteem, family unity and social support, personal freedom and hope are all mutually interrelated in order to cope with the ambiguities caused by the disease and life (Öz 2004).

It was seen that statistically significant difference existed between presence of somebody whom the patients could ask for help and perception of general health ($p < .01$). The studies of Arslantaş et al. (2010) and Tan et al. (2005) pointed out that there was a negative correlation between social support perceived by patients and hopelessness. As mean score of social family support perceived by patients increased, mean hopelessness scores reduced (Küçükberber et al. 2011; Tan et al. 2005). In a study done with patients who had myocardium infarctus, it was found out that those patients who did not have somebody whom they could ask for help had higher mean hopelessness scores and lower mean scores of quality of life (Öz 2006). Hope, important for human life, is perceived as a healing power and an impetus that provides us with strength in order to cope with momentary difficulties and to get rid of suffering. Hope has been recognized as a vital theme that strengthens psychological and physiological defense mechanisms of families as well as individuals (Öz 2004). With support received from family, patients are expected to demonstrate lower level of hopelessness and higher level of quality of life.

It was seen that those with previous heart attacks demonstrated higher level of hopelessness but lower level of quality of life. In the study of Öz (2006) done with the patients who had myocardium infarctus, it was reported that the patients who had previous heart attacks demonstrated high level of hopelessness but low level of cognitive dimension of quality of life. In a study undertaken with patients with cardiac insufficiency, it was determined that quality of life of the patients who were previously hospitalized was low (Demir 2008). Similarly, in another study it was seen that quality of life of the patients who had cardiac problems was low (Yıldırım and Atalay 2002). One-third of the patients who were discharged from hospital with cardiac insufficiency were re-hospitalized within 3 months (Keresztes and Wcisel 2009). Hospitalization rates for patients with heart failure have remained stagnant over the past decade, with the current thirty-day rehospitalization rate for heart failure holding steady at 24.7% (Albert et al. 2015; Biddle and Kitko 2015). In this case, patients' quality of life decreases as their hopelessness level increases.

It was found out that there was no significant difference between disease duration and mean hopelessness scores but hopelessness level of those whose disease duration was

≥11 years was higher. Besides, it was noted that there was a significant difference between disease duration and global quality of life ($p < .05$). Among the hemodialysis patients, too, the difference between disease duration and mean hopelessness scores was found to be statistically insignificant (Tan et al. 2005). In another study, it was pointed out that quality of life of those with 1–3 years of disease duration was low (Demir 2008).

It was seen that hopelessness level of those who had another disease except for cardiac diseases was high but their quality of life was low. It was noted that there was a difference only between presence of another disease and physical function ($p < .05$). In a study done with inpatient patients, it was demonstrated that mean hopelessness score of those without any accompanying disease was higher than those with an accompanying disease (Arslantaş et al. 2010). In a study conducted with cardiac diseases, it was determined that quality of life of those without any accompanying disease was high (Küçükberber et al. 2011). In another study, it was noted that patients that did not have any disease except for cardiac insufficiency demonstrated high level of quality of life (Demir 2008). The findings of the above mentioned studies concurred with the findings of the current study.

When patients' mean hopelessness and quality of life scores were examined, it was seen that their mean hopelessness score was 11.01 ± 3.10 while their mean quality of life score was 40.47 ± 9.31. It was found out that patients' hopelessness level was high but their quality of life was low. In a study done by Kangelaris et al. (2010) with patients with cardiovascular diseases, it was emphasized that hopelessness was widespread among the 52% of the subjects. The studies of Savaşan et al. (2013) and Arslantaş et al. (2010) conducted with hospitalized patients with coronary artery diseases reported low hopelessness scores. The study of Bahadir Yilmaz and Ergun (2010) conducted with patients with cardiac insufficiency detected that hopelessness was at moderate level. Following the procedures used for the cardiac patients like implantable cardioverter defibrillators, patients' basic emotions are affected (Berg et al. 2015). These procedures may lead to increasing hopelessness level among the patients. Nurses play key roles in supporting patients with implantable cardioverter defibrillator in terms of life management with implantable cardioverter defibrillator and bear a role in assessing their emotional status because these patients undergo changed emotional status (Berg et al. 2015). In a study done with cardiac patients (Küçükberber et al. 2011), it was found out that patients' mean quality of life scores were higher than the current study. The study of Efe and Olgun (2011) conducted with patients with cardiac insufficiency pointed out that quality of life of these patients increased after training. In another study done with patients with chronic cardiac insufficiency, it was seen that patients' quality of life scores increased as their depression scores reduced (Bekelman et al. 2010). Both chronic hemodialysis patients and congestive heart failure patients had low level of quality of life (Coelho et al. 2005; Juenger et al. 2002). These findings were in agreement with our findings.

It was detected that as patients' mean hopelessness scores increased their quality of life scores decreased. In a study conducted with patients with coronary artery disease, it was seen that as patients' hopelessness level increased their healthy life style behaviors decreased (Savaşan et al. 2013). The study of Öz (2006) done with patients with myocardial infarction stated that their hopelessness level affected physical and cognitive dimension of quality of life negatively. It was seen that quality of life was affected by hope and positive spirit most. According to the findings of the study of Juenger et al. (2002), quality of life of the patients with congestive heart failure deteriorated considerably. In an interventional study done by Berg et al. (2015), it was reported that a more extensive nursing intervention was needed among the patients with implantable cardioverter defibrillator in order to reduce their emotional burden and to prevent pathologic anxiety and

depression effectively. Providing cardiac patients with care will both reduce mortality and morbidity and result in improvements in treatment outcomes by increasing patients' quality of life (Keresztes and Wcisel 2009). With the nursing care given to cardiac patients, patients' hope level and quality of life will enhance. It may be recommended that training programs should be organized for the cardiac patients.

The results obtained from the current study that helped determine hopelessness and quality of life of the cardiac patients could be listed as below:

- There was a positive correlation between the age of the patients and their hopelessness level, but a negative correlation between the age and their quality of life. As age increased so did hopelessness level of the patients but not their quality of life,
- Educational status affected patients' hopelessness level, physical function, vitality and global quality of life positively,
- Economical status affected patients' hopelessness level and perception of general health,
- There was a statistically significant difference between level of perception of health status and hopelessness, vitality, perception of general health, global quality of life,
- Person with whom the patients lived together and presence of somebody whom the patients could ask for help affected perception of general health positively,
- Disease duration affected global quality of life positively. Presence of another disease affected physical function of quality of life positively,
- Patients' mean hopelessness scores were high while their mean quality of life scores low,
- As hopelessness level of the cardiac patients increased their quality of life reduced. It was determined that the desperation levels of the patients were above the middle level and the quality of life was low.

In light of these results;

- Hope level and level of quality of life of the cardiac patients should be regularly assessed in relation with their emotional and physical status,
- Patients with high hopelessness level and low quality of life should be referred to psychiatric policlinics,
- Training programs that aim at enhancing hope level of cardiac patients and their quality of life should be organized by taking their individual characteristics into consideration.

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