Research Article

The Effect of Nursing Care Satisfaction on Illness Perception in Patients with Acute Coronary Syndrome

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Abstract

Objective: This study was conducted as a descriptive, correlational and cross-sectional study to examine the perception of illness in patients with acute coronary syndrome.

Methods: The study was carried out in the cardiology services of the training and research hospital. The data of the study were collected with the "Socio-Demographic and İllness Characteristics Information Form of the Patients", "Newcastle Satisfaction with Nursing Scale" and "Illness Perception Questionnaire". The sample of the study consisted of 377 patients followed up with acute coronary syndrome. Kolmogorov-Smirnov, Kruskal Wallies, Mann Whitney U, Spearman correlation analyzes were used to evaluate the data.

Results: It was determined that the patients included in the study experienced pain (96.3%) in the first rank according to the illness symptom (identity) dimension of the Illness Perception Questionnaire. According to the mean scores of the illness perception dimensions, "Emotional Representations" was the highest with 24.94±5.66, and the highest "Risk Factors" with 20.29±5.22 in the sub-dimension point averages for the causes of the illness. The mean score of the patients according to the Newcastle Satisfaction with Nursing Scale was determined as 80.91±17.36. It was determined that there was a weakly significant positive correlation between Newcastle Satisfaction with Nursing Scale and the Duration (acute / chronic) and Results sub-dimensions of Illness Perception Questionnaire ($P<0.001$).

Conclusion: Patients demonstrate that they believe acute coronary syndrome is a chronic illness with serious consequences. In line with the results, it is suggested that nurses should plan service at a level that improves the care of patients' perceptions of illness.

Keywords: acute coronary syndrome, care, nursing, illness perception, satisfaction

1 INTRODUCTION

Acute Coronary Syndrome (ACS) is a cardiovascular illness that results in myocardial ischaemia due to obstruction of the coronary vessels that supply the heart. This clinical condition results in acute myocardial infarction, which represents a significant cause of morbidity and mortality[1,2]. Acute coronary syndrome is characterised by a constellation of symptoms, including radiating pain, nausea, vomiting, dyspnoea, sweating, syncope, cervical and/or thoracic pain, chest pain at rest or with movement, and limited activity. The initial symptom to manifest is chest pain[3]. In studies conducted with patients diagnosed with ACS, a number of symptoms were reported, including chest pain, cold sweating, dyspnoea, weakness, fatigue, nausea and insomnia[4-6]. It is important for individuals to take these symptoms seriously in order to apply for a health assessment, receive an accurate diagnosis and potentially avoid serious outcomes.

The formation of a belief system regarding one's health status is a common phenomenon among individuals diagnosed with a illness, a process known as illness perception. The perception of a situation is unique to each individual. The individual makes sense of the illness in their own way, and this sense determines their future behaviours in managing the illness[7,8]. Illness perception is a cognitive framework that guides individuals' behaviours in managing the illness. It can be influenced by a number of factors, including age, gender, experiences, coping mechanisms, values and genetic characteristics[9,10]. In a study conducted with patients diagnosed with ACS in China, it was found that illness-related factors and socio-demographic characteristics had the greatest impact on illness perception[6].

In illnesss such as ACS, where early diagnosis and intervention are crucial, the knowledge and attitudes of patients play a pivotal role in their survival. It is, therefore, essential to enhance their illness perceptions. In studies, it has been demonstrated that patients do not associate some of the symptoms they perceive after diagnosis with heart illnesss. However, patients tend to perceive the illness as having significant consequences, believe in their ability to control it, and view treatment as an effective means of managing the illness[5,11]. The reinforcement of a positive perception of illness in individuals with chronic illnesss has been demonstrated to enhance their capacity to adapt to and manage the illness successfully[12,13]. Nursing care has been identified as a crucial factor in fostering patient compliance with treatment and influencing illness perception[14].

It is of the utmost importance for patients to avoid circumstances that may endanger their lives in the event of ACS and to utilise secondary prevention techniques[15]. The European Society of Cardiology (ESC) Guideline for the Prevention of Cardiovascular Disease in Clinical Practice recommends regular medication use, smoking cessation, increased physical activity, weight control, and the maintenance of healthy dietary habits for the purpose of secondary prevention[16]. Nevertheless, patients are readmitted to the hospital shortly after being discharged due to inadequate illness management[15]. The provision of quality care and training by nurses may facilitate the development of patient awareness regarding the severity of ACS and the necessity of secondary prevention measures. This, in turn, may lead to an enhanced perception of the illness among patients. In the study conducted by Touwen and colleagues, it was determined that the quality of care provided to individuals with chronic illnesss had a positive impact on the patients' perception of their illnesss and contributed to more effective illness management[17]. The studies conducted revealed a positive correlation between patient satisfaction with the quality of nursing care received and their compliance with treatment, as well as their perceptions of the illness in question[11,13,14]. Effective management of chronic illness has been demonstrated to result in a reduction in healthcare expenditure and hospitalisations, an enhancement in quality of life and patient satisfaction, and a favourable impact on patients' perceptions of their condition[18]. It is therefore imperative that nurses responsible for the care of patients with ACS are aware of the perceptions of the services they provide and plan care in a manner that aligns with these perceptions. Given that ACS presents as an acute clinical picture, it is imperative that nursing care provided to this cohort of patients is meticulously planned. In the existing literature, there are studies that examine the levels of knowledge about symptoms, attitudes and illness perception of patients with ACS[1,5,19]. However, no studies have examined the impact of patient satisfaction with nursing care on illness perception, particularly in the context of ACS.

The objective of this study is to ascertain the levels of satisfaction among patients with ACS with regard to the nursing care services they receive, to determine their illness perception, and to determine whether there is a correlation between nursing care satisfaction and illness perception.

2 MATERIALS AND METHODS
2.1 Study Design and Participants

The study was designed as a descriptive, correlational and cross-sectional study. The study was conducted in five cardiology wards of a training and research hospital with a focus on cardiovascular surgery. The hospital has a total of 384 beds, with the cardiology wards accounting for 145 of these. A total of 50 nurses are employed in these clinics. The data were collected over the course of the study between 1 July and 30 December 2021.

The study population consisted of patients hospitalised in cardiology wards and diagnosed with ACS between the data collection dates. The sample size was calculated

as n=377 using the population unknown method. The study population comprised patients aged 18 and over who were conscious and had no impairment in speech or comprehension. Patients who did not consent to participate in the study were excluded from the analysis.

2.2 Data Collection Instruments

The data were collected using the Socio-Demographic and İllness Characteristics Information Form, Newcastle Satisfaction with Nursing Scale (NSNS) and the Illness Perception Questionnaire (IPQ)

2.2.1 Socio-Demographic and Illness Characteristics Information form

The form, which was developed by the researcher based on a review of the relevant literature, comprises a total of 10 questions. These determine the age, gender, marital status, educational status, employment status, economic status, familial predisposition, other known chronic illness status, the time of the first diagnosis of ACS and the number of treatments related to this illness.

2.2.2 Newcastle Satisfaction with Nursing Scale

This scale was developed by Thomas et al.[20] and its Turkish validity and reliability study was conducted by Akın and Erdoğan[21]. The scale, comprising 19 items, is designed to assess patient satisfaction with nursing care. It employs a 5-point Likert scale, with responses ranging from 1 (I was not satisfied at all) to 5 (I was completely satisfied). All items on the scale are formulated in a positive manner. The maximum score that can be attained is 95, while the minimum score is 19. The total score is calculated by summing the scores of all items and converting them to a percentage. A score approaching 100 indicates a high level of satisfaction with the quality of nursing care. The Cronbach's alpha coefficient was determined to be 0.96 for both the original and Turkish versions of the scale. In this study, the Cronbach's alpha coefficient was calculated to be 0.98.

2.2.3 Illness Perception Questionnaire

The questionnaire was initially developed by Weinmann in 1996 and subsequently revised by Moss-Morris et al. in 2002[22,23]. A validity and reliability study of the questionnaire in the Turkish population was conducted by Kocaman et al. in 2007[24]. The questionnaire is comprised of three sub-dimensions: The questionnaire comprises three dimensions: symptoms of illness, illness perception and causes of illness. The Cronbach's alpha values for the questionnaire range from 0.69 to 0.89. The Cronbach's alpha values obtained in our study were 0.76 for the illness symptoms dimension, 0.91 for the illness perception (opinions) dimension, and 0.70 for the illness causes dimension.

Symptoms dimension, which pertains to identity,

encompasses 14 common symptoms, including pain, burning sensations in the throat, nausea, dyspnoea, weight loss, fatigue, joint discomfort, burning eyes, respiratory distress, headaches, stomach complaints, syncope, insomnia and weakness. The patient is initially queried as to whether the symptoms in question have been present since the onset of the illness. Subsequently, the patients are queried as to whether the symptoms are associated with the illness. In this dimension, patients are required to respond with either a 'yes' or a 'no' to both question groups. In the evaluation of the illness dimension, the total number of affirmative responses to the second question is calculated.

The Illness Perception Dimension comprises 38 main dimensions and 7 sub-dimensions. The sub-dimension investigating the person's perceptions about the duration of the illness is labelled Duration (acute / chronic) (No:1, 2, 3, 4, 5). A high score on this item indicates that the subject believes the illness will progress chronically. The consequences sub-dimension (No: 6, 7, 8, 9, 10, 11) investigates the beliefs about the severity of the illness and its potential impact on physical, social, and psychological functioning. A high score on this sub-dimension indicates that the subject believes the illness will cause serious consequences and perceives it as a negative outcome. The Personal Control dimension (No: 12, 13, 14, 15, 16, 17, 18) investigates the perception of internal control over the duration, course and treatment of the illness. A high score indicates that the individual possesses a high degree of ability to exert control over the illness. The Treatment Control dimension (No: 19, 20, 21, 22, 23) investigates the belief in the effectiveness of the treatment applied. A high score on this subscale indicates that the subject believes the illness can be controlled with treatment. The dimension investigating understanding of the illness (No: 24, 25, 26, 27, 28) seeks to ascertain the extent of comprehension of the illness in question. The Dimension Of Duration (No: 29, 30, 31, 32) indicates that the individual perceives the illness as cyclical. The Emotional Representations (No: 33, 34, 35, 36, 37, 38) dimension investigates the emotional state of the person in relation to the illness. A high score in this sub-dimension indicates that the individual experiences negative emotions such as anxiety, anger and fear.

The Causes of Illness dimension is constituted by 18 items, encompassing potential etiological agents of illness. It is comprised of four sub-dimensions. The psychological attributions dimension comprises six items, including stress or anxiety, family problems, personality traits, individual behaviour, overwork and emotional state. The risk factors dimension consists of seven items, including hereditary factors, smoking, alcohol consumption, the ageing process, individual behaviour, dietary habits and the quality of medical care received in the past. The immunity dimension comprises three items: the presence of pathogens or viruses, low body resistance, and environmental

pollution. The category of "accident or luck" encompasses items pertaining to accidents, injuries, and misfortune. Additionally, respondents are prompted to identify the three most significant causal factors at the conclusion of the questionnaire, which is then subjected to qualitative evaluation. In evaluating the questionnaire, the total score is not obtained; each sub-dimension is instead evaluated on the basis of the average score[24].

2.3 Procedures

The data were collected from 377 patients diagnosed with ACS who were hospitalised in the cardiology services of the hospital and met the inclusion criteria. Once the patients had been informed about the study and had provided written informed consent, the researcher proceeded to complete the data collection forms. The data were collected on the day that the patient was deemed fit for discharge, in accordance with the standard clinical practice.

2.4 Ethical Considerations

The study was approved by the Üsküdar University's Non-Interventional Research Ethics Committee (Date: 28/06/2021, Decision No: 61351342/June 2021-41) and the hospital where the study would be conducted (decision no: E-28001928-604.01.01). The patients who participated in the study provided informed written consent.

2.5 Data Analysis

The data obtained from the study were analysed using the statistical software package SPSS (Statistical Package for Social Sciences) for Windows, version 26.0. The suitability of the data for normal distribution was evaluated with the Kolmogorov-Smirnov test, which determined that the data did not show normal distribution. The data were presented in the form of numbers, percentages, means and standard deviations. The Mann-Whitney U test was employed to ascertain whether there were any significant differences in the mean scores of the independent variables with two categories and the NSNS and IPQ. The Kruskal-Wallis test was employed for the comparison of questionnaire scores with independent variables comprising more than two categories. The statistical significance was determined at the 0.05 level of probability.

3 RESULTS

Of the patients who participated in the study, 73.2% were male, 77.2% were married, 27.3% were primary school graduates, 39.5% were self-employed, 58.1% had moderate economic status and 50.4% were employed. The mean age of the patients was 62.27±12.59 years, the mean duration of hospitalisation was 3.16±1.34 days, and the mean duration of illness was 4.13±5.47 years.

The mean scores for each sub-dimension of the IPQ are presented in Table 1. The mean score for the Illness Symptoms Dimension was calculated to be 5.63±3.34.

The sub-dimensions of the Illness Perception Dimension were also analysed. The mean score for the Duration (acute/chronic) sub-dimension was 17.17±7.36, the mean score for the Results sub-dimension was 20.10±5.92, and the mean score for the Personal Control sub-dimension was 21.52±4.95. The mean score for the Treatment Control sub-dimension was also calculated. The mean score for the dimension was 18.80±4.06, while the mean score for the sub-dimension of Understanding the İllness was 13.28±7.18. The mean score for the Duration sub-dimension was 14.13±3.64, and the mean score for the Emotional Representations sub-dimension was 24.94 ±5.66. Upon examination of the sub-dimensions of the Causes of Illness dimension, the mean score of the Psychological Factors sub-dimension was found to be 17.06±5.11, while the mean score of the Risk Factor sub-dimension was 20. The mean score for the Immunity sub-dimension was 7.84±2.62, while the mean score for the Chance Factor sub-dimension was 4.24±2.81. The mean score for the patients who participated in the study was found to be 80.91±17.36 (Table 1).

It was determined that the mean scores of the Disease Symptoms (Identity) Dimension of the patients participating in the study did not differ statistically according to gender, marital status, educational status, employment status and economic status (P>0.05) (Table 2).

Table 3 presents a comparison of the sub-dimensions of the Illness Perception dimension, as defined by the descriptive characteristics of patients with acute coronary syndrome. The mean score for the Duration sub-dimension was found to be higher for female participants than for male participants (P=0.012). The mean scores for the Duration and Consequences sub-dimensions were found to be lower in married patients than in single patients. Conversely, the mean scores for the Personal Control, Treatment Control and Understanding the Disease sub-dimensions were statistically higher (P<0.05). The mean scores of the Process and Results sub-dimension were found to be higher in patients who were literate and had completed primary school than in those with other educational levels (P<0.001). The mean scores for the Personal Control, Treatment Control and Understanding the Disease subscale were found to be higher for patients with undergraduate and graduate degrees than for other groups (P<0.001) (Table 3).

The mean scores for the Duration and Results sub-dimensions were higher in non-employed patients than in employed patients. However, the mean scores for the Personal Control, Treatment Control and Understanding the Disease sub-dimensions were higher in employed patients (P<0.05). The mean scores for the Duration, Results, and Duration sub-dimensions were found to be higher for patients with a poor economic status than for those with a moderate or good economic status (P<0.01). The mean

Table 1. Distribution of the Mean Scores of the Patients in the Illness Perception Questionnaire (IPQ) and Newcastle Satisfaction with Nursing Scale (NSNS)

Illness Perception Questionnaire	Mean	SD
Illness Symptoms (Identity) Dimension	5.63	3.34
Illness Perception Dimension		
Duration (acute/chronic)	17.17	7.36
Results	20.10	5.92
Personal control	21.52	4.95
Treatment control	18.80	4.06
Understanding the illness	13.28	7.18
Duration	14.13	3.64
Emotional representations	24.94	5.66
Causes of Illness		
Psychological Factors	17.06	5.11
Risk Factor	20.29	5.22
Immunity	7.84	2.62
Chance Factor	4.24	2.81
Newcastle Satisfaction with Nursing Scale	80.91	17.36

Table 2. Comparison of the Mean Scores of the Illness Symptoms Dimension of the IPQ According to the Descriptive Characteristics of Patients with ACS

Descriptive Characteristics		n	Mean	SD	χ^2/Z	P
Gender	Male	276	5.45	3.13	Z=-1.260	0.208
	Female	101	6.13	3.82		
Marital status	Single	86	5.39	3.77	Z=-1.370	0.171
	Married	291	5.70	3.20		
Education status	Literate and primary education	157	5.28	2.84	χ^2=8.831	0.116
	High School	90	6.13	3.15		
	Undergraduate and postgraduate	46	5.53	3.15		
Employment status	Employed	190	5.56	3.22	Z=-0.117	0.907
	Not Employed	187	5.70	3.45		
Economic situation	Good	63	5.92	4.12	χ^2=0.185	0.912
	Moderate	219	5.69	3.36		
	Poor	95	5.31	2.63		

Notes: χ^2: Kruskal Wallies, Z: Mann Whitney U, Reliability coefficients ranged between 0.910-0.695 for IPQ

scores of the Personal Control, Treatment Control and Understanding the Disease subscale scores for patients with good economic status were found to be higher (*P*<0.001) (Table 3).

The study revealed that the mean score of the risk factor sub-dimension of the disease causes dimension was higher in men than in women (P<0.01). The mean score for the immunity sub-dimension was found to be higher for single patients than for married patients (P<0.01). The mean immunity sub-dimension score was found to be higher among literate and primary school graduates (P=0.017) and non-working patients (P=0.000). Patients with a poor economic status exhibited higher scores in all sub-dimensions of the Causes of Disease Dimension compared to those with

a higher socioeconomic status (P<0.05) (Table 4).

A weakly significant positive correlation was identified between the NSNS and the Duration (acute/chronic) and Results subscales of the IPQ (P<0.001) (Table 5).

4 DISCUSSION

The objective of this study was to analyse the effect of nursing care satisfaction on the perception of illness in patients with acute coronary syndrome. The data obtained from the study indicated that patients received high scores from the emotional representations and consequences sub-dimensions. This result suggests that they experience intense feelings of anxiety and fear about the disease and perceive it as a serious threat to their health. Another important finding

Table 3. Comparison of Mean Scores of Illness Perception Dimension According to Descriptive Characteristics of Patients with ACS

Descriptive Characteristics	n	Duration (acute/chronic) Mean±SD	Results Mean±SD	Personal Control Mean±SD	Treatment Control Mean±SD	Understanding the illness Mean±SD	Duration Mean±SD	Emotional Representations Mean±SD
Gender								
Male	276	16.57±7.13	19.82±5.81	21.71±4.88	18.83±4.04	13.7±7.29	14.04±3.73	24.86±5.87
Female	101	18.8±7.76	20.85±6.18	21±5.13	18.72±4.14	12.12±6.78	14.37±3.4	25.14±5.09
Z		-2.513	-1.632	-1.194	-1.099	-2.042	-0.552	-0.140
P		0.012	0.103	0.233	0.272	0.051	0.581	0.889
Marital status								
Single	86	21.34±6.69	22.42±5.66	20.01±5.15	17.44±3.99	11.71±6.71	14.42±3.94	25.43±5.57
Married	291	15.94±7.1	19.41±5.83	21.97±4.81	19.2±4	13.74±7.26	14.04±3.55	24.79±5.69
Z		-5.972	-4.283	-3.290	-3.650	-2.402	-1.033	-1.428
P		0.000	0.000	0.001	0.000	0.016	0.302	0.153
Education status								
Literate and primary education	157	23.28±5.51	24.00±4.94	17.94±5.23	16.63±3.53	10.41±5.65	14.67±4.11	26.02±5.42
High School	90	15.46±7.11	18.88±6.37	22.57±4.62	19.12±3.95	13.6±7.5	14.1±3.78	25.42±5.75
Undergraduate and postgraduate	46	11.46±5.88	16.18±5.47	25.37±3.38	21.05±3.49	15.76±6.91	13±3.53	25.47±5.74
χ^2		68.601	44.810	56.952	39.354	16.791	11.049	13.717
P		0.000	0.000	0.000	0.000	0.005	0.050	0.018
Employment status								
Employed	190	14.31±6.9	18.45±5.97	22.84±4.4	19.56±3 .83	14.17±7.42	14.09±3.62	25.17±5.83
Not Employed	187	20.07±6.65	21.78±5.39	20.17±5.13	18.03±4.15	12.37±6.83	14.17±3.67	24.7±5.49
Z		-7.628	-5.358	-5.146	-4.388	-2.669	-0.240	-1.350
P		0.000	0.000	0.000	0.000	0.008	0.810	0.177
Economic situation								
Good	63	13.79±6.71	18.14±6	23.6±4.26	19.86±3.73	15.59±7.36	13.65±3.82	24.75±6.83
Moderate	219	16.42±7.3	19.25±5.82	21.98±4.76	19.2±4.16	13.8±6.96	13.72±3.55	24.24±5.74
Poor	95	21.11±6.23	23.36±4.8	19.12±4.93	17.18±3.6	10.53±6.82	15.39±3.49	26.66±4.12
χ^2		44.153	39.047	35.212	27.247	23.229	15.650	13.004
P		0.000	0.000	0.000	0.000	0.000	0.000	0.002

Notes: χ^2: Kruskal Wallies, Z: Mann Whitney U, Reliability coefficients ranged between 0.910-0.695 for the IPQ.

of the study was that patients had high perceptions in the sub-dimensions of personal control, disease risk factors and treatment control. These results show that patients are aware of individual disease management, which is effective in managing the disease, and that they believe that the disease can be kept under control by controlling disease risk factors and treatment. It can be said that the finding that the outcomes sub-dimension of the IPQ in particular is positively correlated with the NSNS means that satisfaction with care leads patients to believe that they can control the outcomes associated with the disease. Similarly, in a study a significant positive relationship was found between the treatment control and illness understanding sub-dimensions of patients with good care perception, revealing that care influences illness perception[13]. In another study, a significant inverse correlation was identified between the number of disease types, emotional representations,

psychological attributions, risk factors, accident or chance sub-dimensions of the disease perception scale, and nursing care satisfaction. As nursing care satisfaction increased, negative feelings about the disease and the belief in the control of the disease decreased[14]. The study conducted by Yılmaz and Karaman found that providing patients with information about their disease and treatment was an effective method for modifying their negative perceptions of the disease[8].

The analysis revealed no statistically significant differences in the IPQ Disease Symptoms sub-dimension scores according to the socio-demographic characteristics of patients with ACS. Patients with ACS typically describe chest pain and difficulty in breathing as the initial symptom, followed by symptoms such as fatigue, headache, dizziness, sweating, and nausea[25]. As the majority of patients in

Table 4. Comparison of Mean Scores of the Causes of Illness Dimension According to Descriptive Characteristics of Patients with ACS (N=377)

Descriptive Characteristics	n	Psychological Factors Mean±SD	Risk Factor Mean±SD	Immunity Mean±SD	Chance Factor Mean±SD
Gender					
Male	276	17.06±5.19	20.72±5.39	7.72±2.73	4.29±3.12
Female	101	17.06±4.93	19.12±4.55	8.15±2.29	4.11±1.68
Z		-0.253	-2.625	-1.585	-0.044
P		0.800	0.009	0.113	0.965
Marital status					
Single	86	17.59±5.73	19.98±5.74	8.59±2.65	4.14±1.98
Married	291	16.9±4.91	20.38±5.07	7.62±2.58	4.27±3.01
Z		-0.994	-0.861	-3.210	-0.103
P		0.320	0.389	0.001	0.918
Education status					
Literate and primary education	157	17.26±4.82	20.28±5.87	8.48±2.25	3.87±1.87
High School	90	16.19±5.13	19.49±4.98	7.13±2.52	4.39±4.7
Undergraduate and postgraduate	46	15.87±4.73	20.08±4.76	7.58±1.98	3.84±1.78
χ^2		12.280	5.378	13.859	10.286
P		0.031	0.372	0.017	0.068
Employment status					
Employed	190	16.9±5.22	20.42±5.25	7.36±2.59	4.09±1.86
Not Employed	187	17.22±5.01	20.16±5.21	8.33±2.58	4.39±3.51
Z		-0.840	-0.577	-3.628	-0.575
P		0.401	0.564	0.000	0.565
Economic situation					
Good	63	15.95±5.72	20.14±5.49	7.65±2.64	4.63±5.49
Moderate	219	16.88±5.08	19.69±5.13	7.53±2.51	3.94±1.79
Poor	95	18.22±4.58	21.77±5.02	8.66±2.73	4.67±1.9
χ^2		9.720	11.398	15.158	11.143
P		0.008	0.003	0.001	0.004

Notes: χ^2: Kruskal Wallies, Z: Mann Whitney U, The safety factors change between 0.910-0.695 for disease perception.

Table 5. The Relationship between NSNS and IPQ Patients with ACS

IPQ	NSNS	
	r	P
Illness Symptoms Dimension	-0.020	0.701
Duration (acute/chronic)	0.260	0.000
Results	0.226	0.000
Personal control	-0.091	0.079
Treatment control	-0.091	0.077
Understanding the illness	0.040	0.438
Duration	0.001	0.989
Emotional representations	-0.039	0.447
Psychological Factors	0.116	0.024
Risk Factor	-0.045	0.381
Immunity	0.098	0.057
Chance Factor	-0.039	0.451

Notes: r: Spearman Correlation Analysis.

the study exhibited similar symptoms, it is unsurprising that no significant differences were observed according to individual characteristics. However, Koçkara did identify notable variations in disease symptom scores according to gender and education levels[5].

The findings of our study indicate that women exhibited elevated scores on the acute/chronic subscale and perceived their condition as chronic. The studies conducted by Koçkara and Yıldırım found that there was no significant difference in the disease perception dimension scores of patients diagnosed with ACS and hypertension according to gender characteristics[5,26]. The findings indicated that married patients with ACS exhibited higher mean scores on the subscales of personal control, treatment control, and disease understanding than their single counterparts. A statistically significant difference was observed between single and married patients with regard to both the duration (acute/chronic) and results sub-dimensions (*P*<0.05). In a study conducted by Yıldırım with patients diagnosed with hypertension, it was found that married individuals exhibited higher scores in the sub-dimensions of personal control, treatment control, understanding the disease, and duration, while singles demonstrated higher scores in the sub-dimensions of emotional representations and consequences[26]. The study conducted by Koçkara revealed that married individuals exhibited high scores in the following sub-dimensions: results, personal control, treatment control, understanding the disease, duration, and emotional representations[5]. In the study conducted by Ciddi, it was posited that married individuals exhibited elevated levels of personal and treatment control, whereas single individuals demonstrated heightened levels of outcome control[27]. The study conducted by Rassart et al. found no significant difference between marital status and the mean score of the disease perception scale sub-dimension[10]. Our study results are in accordance with those of other studies conducted previously, however, it may be posited that the belief that married individuals are able to control the disease may have increased with the social support received from their spouse and children, if they are present in the individual's life.

It was established that patients with ACS who were literate and had completed primary school exhibited elevated mean scores for the duration, outcomes, and emotional representations subscales. Individuals with undergraduate and postgraduate qualifications exhibited elevated scores for the sub-dimensions pertaining to personal control and treatment. Yan et al. reported that patients with a higher level of education exhibited higher scores for the sub-dimensions of personal control and understanding the disease[6]. The study conducted by Koçkara revealed no statistically significant difference in the mean scores of the disease perception sub-dimensions according to the participants' educational status[5]. In the

study conducted by Yıldırım , a significant difference was identified in the emotional representations sub-dimension score, with illiterate patients exhibiting higher scores than those with other levels of education[26]. Similarly, Bunc et al. reported that individuals with coronary heart disease who were engaged in educational activities demonstrated elevated mean disease perception dimension scores[28]. In a study on disease perception in coronary heart patients, Ludt et al.[29] reported that there was no significant difference in educational status between patients with higher and lower disease perception dimension scores. The findings of our study are not in accordance with those reported in the existing literature. It can be posited that individuals with low educational attainment exhibit negative disease perceptions, which may be attributed to heightened anxiety and fear about the disease. The high levels of personal and treatment control observed in patients with undergraduate and postgraduate degrees may be associated with their access to information about the disease and their capacity to comprehend the information provided.

The mean scores for the duration and outcomes subscales for working patients with ACS indicate that they perceive their disease as non-chronic and exhibit lower levels of negative perceptions regarding disease outcomes. Conversely, the mean scores for personal control, treatment control and understanding the disease indicate that the patients believe the disease is controllable and treatable. In a study, no significant differences were observed in the mean scores of the disease perception dimension between working and non-working patients[13]. This can be attributed to the fact that those in employment enjoy superior financial prospects and a higher standard of living. Our other finding that lends support to this result is that patients with a favourable economic status should exhibit comparable scores with working patients in the same sub-dimensions. Yıldırım observed that individuals with a favourable economic status exhibited elevated mean scores for the sub-dimensions of personal control, duration, results and treatment control[26]. A study conducted with individuals diagnosed with cardiovascular disease revealed that economic status has a positive effect on disease perception with regard to risk factors, symptoms and the effectiveness of treatment[30]. Two studies have indicated that there is no statistically significant correlation between an individual's economic status and their perception of disease[5,27]. In our study, an analysis of the causes of disease dimension according to the descriptive characteristics of patients with ACS revealed that males, single individuals, those who were literate and had completed primary school, and those who were not employed exhibited higher mean scores in the immune sub-dimension. Conversely, patients who perceived their economic status as poor demonstrated higher scores across all sub-dimensions related to the causes of disease. The findings of previous studies also indicated that patients' perceptions of the aetiology of disease were influenced by

sociodemographic factors. Two studies have demonstrated that the mean score for the psychological factors sub-dimension is higher in women. Similarly, the mean score for the risk factor sub-dimension is higher in men, which is consistent with our findings[6,26]. It is established that male patients are at a higher risk of developing heart disease, which may be a contributing factor to the observed result. In a study, it was observed that the risk factors associated with singles and the mean immunity sub-dimension scores of married patients were higher[26]. In a study, it was determined that the mean score of the psychological factors sub-dimension for singles was high, and there was a statistically significant difference in the mean score of the physical factors sub-dimension according to educational status[6]. The studies show that there is no statistically significant difference in the scores of the causes of HTS disease dimension according to the educational level and economic status of the participants[5,6,26]. The discrepancies in the findings of the studies may be attributed to factors such as the individual characteristics of the patients and the severity of the disease.

The mean scores of the patients who participated in the study were found to be significantly higher than the levels of satisfaction with nursing care reported in the literature[31-33]. Upon examination of the relationship between the mean scores of the nursing care satisfaction level and the mean scores of the disease perceptions of patients with ACS, a weakly significant positive relationship was identified in the duration and results sub-dimensions of the IPQ. This finding indicates that the patients in question perceive ACS as a chronic disease, which they believe will have adverse consequences. A review of the literature revealed no studies that had examined the relationship between patient groups diagnosed with ACS and their perceptions of nursing care satisfaction and disease. In studies examining the relationship between nursing care satisfaction and illness perception in diverse patient populations, it has been established that high levels of nursing care satisfaction are associated with a reduction in negative attitudes and emotions related to illness perception. Furthermore, there is a positive correlation between these two variables[13,34]. It is of the utmost importance that patients receive the requisite nursing care services to facilitate a positive shift in their disease perceptions. It seems reasonable assumed that the provision of care services will result in an increase in nursing care satisfaction among patients.

4.1 Study Limitations
Since this study was conducted only in a state hospital, the results cannot be generalised to all ACS patients. It may be appropriate to repeat the study with patients hospitalised in different hospitals and with larger sample groups.

5 CONCLUSION
A significant issue in the field of cardiovascular disease is the lack of awareness among patients regarding the risk factors associated with this condition. Additionally, patients often fail to adopt recommended preventive measures and do not adhere to the recommended treatment plan. The results of this study demonstrate that patients' perceptions of illness are shaped by sociodemographic factors. Additionally, it was observed that as patients' perceptions of illness increased, their perceptions of care also demonstrated a positive trend. Patients seek to contextualise their illness within the framework of their personal experiences, knowledge, values, beliefs and needs. It is crucial for nurses to assess disease perception, a key aspect in the management of chronic diseases, to facilitate patient involvement in their own care. In individuals diagnosed with ACS, the risk factors for the causes of the disease should be determined and appropriate nursing care provided in accordance with these factors. It is recommended that an institutional policy be developed to measure the perception of illness and satisfaction with care from the time of hospitalisation to discharge. This should be integrated into nursing practices. It is recommended that in-service training be provided for nurses to develop an awareness of the relationship between illness perception and care satisfaction.

Conflicts of Interest
The authors declared no conflict of interest.

Data Availability
All data generated or analyzed during this study are included in this published article.

Author Contribution
Uysal N and Aşıkoğlu C were in charge of study conception and design, analysis and interpretation of results and drafting manuscript preparation. Aşıkoğlu C were in charge

of data collection. All authors approved the final version of the manuscript.

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