

## Patient's Satisfaction with Coronary Artery Disease Concerning Medical Care Services at Teaching Hospitals in Erbil City

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### ABSTRACT

**Background and Objectives:** Coronary artery disease is now broadly recognized as a major global health issue. Patient's satisfaction with medical care services is an important health outcome. The study was to assess the satisfaction level of patients with coronary artery disease concerning medical care services and to find out the difference between patients' satisfaction and the socio-demographic characteristics of the patients.

**Methods:** A descriptive cross-sectional study design was conducted from February 2022 to May 2022. To find out the satisfaction level of patients with coronary artery disease concerning medical care services. Researchers used a non-probability purposive sampling technique among 205 patients diagnosed with coronary artery disease. Data were analyzed using Statistical Package for the Social Sciences version 25.

**Results:** The result shows that half of the sample (50.7%) was among the age group 61 years and older. More than half of them (51.2%) were females. About (58%) of the participants were illiterate. The majority (79%) of the samples were married. However, (46.8%) of the study samples were housewives and living in an urban area (47.8%). The highest percentage of the samples (64.9%) had satisfied with medical care. There was a significant difference among patients' medical care satisfaction: age, gender, marital status, and occupational status.

**Conclusion:** A substantial proportion of patients were satisfied with medical care, and there was a significant difference between patients' medical care satisfaction and age, gender, marital status, and occupational status.

**Keywords:** Patient's Satisfaction; Coronary Artery Disease; Medical Care Services; Erbil City.

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## INTRODUCTION

The lining of arterial blood vessels develops an abnormal buildup of lipid, or fatty substances and fibrous tissue, known as coronary artery disease (CAD). These substances cause the arterial lumen to narrow and block, which lowers blood flow to the myocardium [1] it has remained the world's leading killer and the source of public health issues, as well as one of the most prevalent causes of morbidity and mortality in many communities [2]. According to health data from the American Heart Association (AHA), coronary artery disease remained the leading cause of mortality in more than 190 countries, with 17.3 million deaths per year. By 2030, the number is estimated to rise up to 23.6 million (3). In United States of America, CAD is the most common type of heart disease, killing 365,914 people in 2017. About 18.2 million adults age 20 and older have CAD (about 6.7%) and 2 in 10 deaths from CAD happen in adults less than 65 years old (4). The prevalence of CAD has been found to range from 5.4 percent to 13.4 percent in the Middle East [5,6]. According to a study conducted in Tehran, the prevalence of CAD among the Tehranian population was 15.81% (8.62% for men and 7.19% for women respectively) [7]. Patient satisfaction is an essential component in evaluating the quality of healthcare services because it shows how well the staff is achieving the patients' goals. It has a significant impact on patients' expectations [8]. It was initially expressed by Risser in 1975 as the grade of agreement between patients' expectations of the optimal level of treatment and their perceptions of the care they receive [9]. Medical care is an essential hospital service or technical quality. It refers to "what" treatment the patient receives from the physician and is established on

the precision of medical diagnosis, treatment, and adherence to professional principles. Patients may not believe they are getting high-quality care when a hospital falls short in this area [10]. Successful physician-patient communication has been indicated to improve health outcomes by raising patient satisfaction, enhancing patient comprehension of health issues and available treatments, promoting better adherence to treatment regimens, and offering patients support and assurance [11]. Effective collaboration of health care professionals in care of patients with heart disease will usually result in good quality care for the patient [12]. The record from Erbil General Directorate of Health showed that in Erbil Government, there were about 8853 patients diagnosed with CAD during 2019-2020. Because heart disease develops gradually and not easily detected, and morbidity and mortality with the disease increase day by day. Therefore, this study was aimed at assessing the socio demographic characteristics, evaluating satisfaction level of patients with CAD related to medical care from the patient's point of view as a determinant of whether there is improvement in patient's satisfaction of care or not, and determining the difference between some of the sociodemographic characteristics of the sample and over all medical care satisfaction levels.

## METHODS

A descriptive cross-sectional study was conducted from February 2022 to May 2022 among 205 CAD patients at Rizgary and Hawler Teaching Hospitals in Erbil City. The sample size was determined by  $Z^2 p q / d^2$ ,  $z$  = confidence interval 95% (1.96),  $p$  = prevalence = (0.1581),  $q$  = (1-p) = (0.8419),  $d$  = sampling error (0.05) [13]. The samples of the study were adult patients

diagnosed with coronary artery disease. Non-probability, purposive sampling techniques were used to collect the relevant study data. The inclusion criteria include adult patients who had coronary artery disease and (were older than 18 years old) as well as both genders. The exclusion criteria included patients who had psychiatric or mental problems and patients with communication problem. The researcher obtained an approval letter from the ethics committee at Hawler Medical University/ College of Nursing (Code No.111, date 7/10/2021). The official approval was taken from general directorate of health, Rizgary and Hawler Teaching Hospitals in Erbil city. Oral informed consent was obtained from patients after a detailed explanation about the aim of the study before starting the interview. Each patient's form was coded with a specific number. The researcher prepared a questionnaire for collecting data based on the review literature and exploring questionnaires used in similar studies. The face-to-face interview technique was used to collect data about socio-demographics and patients satisfaction with medical care services. The questionnaire was checked by a panel of experts of different specialties related to the fields of the present study. Based on their comments, the questionnaire was corrected and changed for suitable data collection. The reliability of the study done by using a pilot study on a purposive sample of 15 CAD patients in January 2022. The researcher spent with each patient approximately 20-30 minutes to respond to questionnaire. The researcher assessed the sociodemographics characteristics, including age, gender, educational level, marital status, occupational status and residential area. Patient satisfaction regarding medical care services consists of 12 questions and includes three answers or options (1=Disagree, 2= Neutral, 3= Agree). Data

were analyzed using Statistical Package for Social Science (SPSS) version 25 for calculating descriptive statistical data analysis (frequency and percentage) and inferential statistical data analysis (independent sample t-test and ANOVA test).

## RESULTS

Table 1 showed the distribution of socio-demographic characteristics of 205 study samples with CAD. Half (50.7%) of the sample were in the age group 61 years and more, followed by 47- 60 years (36.1%), 33 - 46 years (11.2%), while the lowest percentage (2%) were in the age group 19 - 32 years. More than half of them (51.2%) were females, and higher than the percentage of males (48.8%). In addition, the table showed that the highest percentage (58%) of the participants were illiterate, followed those who could read and write (12.2%), primary school (11.2%), institute (7.8%), secondary school (6.8%), and college (3.9%) respectively. It was also revealed that the majority of the samples were married and accounted for (79%). Regarding occupational status, housewives were the highest percentage among all occupational statuses (46.8%), followed by employed (34.6%), unemployed (10.2%), and retired (8.3%) respectively. Meanwhile, most of them were living in an urban area (47.8%).

Table 2 revealed the frequency and percentage of items about medical care satisfaction. Item (The doctor treats you friendly and in a courteous manner) ranked first with a rate of 98.8%, and item (The doctor did not ignore what you told him/or her) ranked second with 93.7%. Furthermore, item (The doctor spends plenty of time with you) ranked third with 91.2%.

**Table 1:** Socio-demographic characteristic of the study sample (n=205)

Socio-Demographic Characteristics	F (%)
Age	19-32
	4 (2)
	33-46
	23(11.2)
Gender	47-60
	74 (36.1)
	61 and more
	104 (50.7)
Educational level	Male
	100 (48.8)
	Female
	105 (51.2)
Marital status	Illiterate
	119 (58)
	Reading and writing
	25 (12.2)
Occupational statuses	Primary school
	23 (11.2)
	Secondary school
	14 (6.8)
Residential area	Institute graduate
	16 (7.8)
	College graduate
	8 (3.9)
	Single
	10 (4.9)
	Married
	162 (79)
	Widowed
	33 (16.1)
	Employed
	71 (34.6)
	Unemployed
	21(10.2)
	Housewife
	96 (46.8)
	Retired
	17 (8.3)
	Urban
	98 (47.8)
	Sub-urban
	93 (45.4)
	Rural
	14 (6.8)

**Table 2:** Patient's satisfaction related to medical care services (n=205)

items	Disagree	Neutral	Agree
	F (%)	F (%)	F (%)
The doctor spends plenty of time with you.	3 (1.5)	15 (7.3)	187 (91.2)
The doctor treats you friendly and in a courteous manner.	3(1.50)	0 (0)	202 (98.5)
The doctor always gives you instructions.	102 (49.8)	33 (16.1)	70 (34.1)
It has easy to access the medical specialist when you need it.	36 (17.6)	35 (17.1)	134 (65.5)
The doctor understands your health need.	5 (2.4)	24 (11.7)	175 (85.5)
The doctor gave you information about your health condition.	80 (39)	21 (10.2)	104 (50.7)
The doctor gave you information about the present treatment.	66 (32.2)	29 (14.1)	110 (53.7)
The doctor sometimes hurries too much when they treat you.	176 (85.9)	13 (6.3)	16 (7.8)
The doctor explains to you the reason for doing tests.	74 (36.1)	31 (15.1)	100 (48.8)
The doctor gives you information about the test results.	59 (28.8)	30 (14.6)	116 (59.6)
The doctor did not ignores what you tell him/or her.	6 (2.9)	7 (3.4)	192 (93.7)
Sometimes you have doubt about the ability of the doctor who treats you.	175 (85.4)	13 (6.3)	17 (8.3)

Table 3 showed the overall levels of patient satisfaction with CAD regarding medical care services. The highest percentage

(64.9%) of the samples had agreed with medical care, followed by neutral (34.1%) and disagree (1%) respectively.

**Table 3:** Overall levels of satisfaction with medical services among patients with CAD (n=205)

Overall level of satisfaction	F (%)
Disagree	2 (1)
Neutral	70 (34.1)
Agree	133 (64.9)

Table 4 showed the difference between socio demographics characteristics the study sample with medical care satisfaction. There was a significant difference between the mean of age group, gender, marital status, occupational status and quality of medical care.

A significant difference was reported for age group ( $p=0.006$ ), gender ( $p=0.004$ ), marital status ( $p=0.039$ ) and occupational status ( $p=0.004$ )  $\leq 0.05$ . While there was no significant correlation with educational level and residential area at  $p 0.05$ .

**Table 4:** Difference between socio-demographics characteristics of study sample and medical care satisfaction (n=205)

Socio-demographic characteristic		F	Mean $\pm$ SD	P-value
Age	19-32	4	30.250 $\pm$ 0.957	F=4.23
	33-46	23	29.739 $\pm$ 2.750	
	47-60	74	29.257 $\pm$ 2.659	
	61 and more	104	27.971 $\pm$ 3.263	P-value= 0.006(S)
Gender	Male	100	29.300 $\pm$ 3.215	t=2.903
	Female	105	28.086 $\pm$ 2.767	
Educational level	Illiterate	119	28.437 $\pm$ 2.845	F=1.663
	Read and write	25	28.560 $\pm$ 3.927	
	Primary school	23	28.261 $\pm$ 2.734	
	Secondary school	14	30.000 $\pm$ 3.038	P-value= 0.145(NS)
	Institute graduate	16	30.250 $\pm$ 2.295	
	College graduate	8	28.375 $\pm$ 4.307	
Marital status	Single	10	29.700 $\pm$ 3.128	t=3.301
	Married	162	28.851 $\pm$ 3.046	
	Widowed	33	27.515 $\pm$ 2.807	P-value= 0.039(S)
	Employed	71	29.718 $\pm$ 2.948	
Occupational statuses	Unemployed	21	28.381 $\pm$ 3.138	F=4.497
	Housewife	96	28.072 $\pm$ 2.753	
	Retired	17	28.117 $\pm$ 3.950	P-value= 0.004(S)
Residential area	Urban	98	29.091 $\pm$ 2.970	F=1.765
	Sub-urban	93	28.322 $\pm$ 3.029	
	Rural	14	28.142 $\pm$ 3.526	

F= one way Anova test, t= independent sample t-test

## DISCUSSION

The result of this study illustrated that the majority of samples were within the age group (61 years and more); this is comparable to the studies conducted in India and Tanzania that showed most of the samples were older than 60 years [14,15]. This finding indicates that in comparison to young people, aging has a significant impact on the development of heart disease. The current study result found that more than half of the study samples were female. That may be due to hormonal changes that occur in females after the age of 45 years, and in addition, females are often overloaded, especially after having several children, which impact on the body's whole function. Correspond to the studies done in Kuwait and Nepal that revealed the majority of samples were females [16,17]. Regarding educational level more than half of the present study samples were illiterate. A similar result was found in the research performed in Maysan/Iraq, among 100 patients in 2015, representing that most of the study samples were illiterate [18]. The present study found that the majority of samples were married. This result is supported by a study conducted in India in 2015 that found that most of study the samples, 68% were married [19]. Most of the samples were housewives. The result is supported by finding from a cross-sectional study in Iran in 2015; which clarified that the majority of study samples were housewives [20]. About residential area, the majority of present study samples were from urban areas. This is consistent with a study done in Iraqi Kurdistan, which concluded that most of the study sample were from urban areas[21]. The result showed the majority of samples satisfied with the items "The doctor treats them friendly and courteously" (98.5), followed by "The doctor did

not ignore what they told him/or her" (93.7%) and (Time spend with the doctor) (91.2%). Likewise, research carried out in Nepal in 2021 had a similar result [22]. On the subject of overall satisfaction with medical care services, most of the samples were satisfied with the care provided by doctors. This agrees with a cross-sectional study finding that was performed in South Saudi Arabia in 2022 among 423 patients, which displayed that the overall satisfaction level related to doctor services was 81% [23]. However, in contrast to the study carried out in Iraq/Baquba, they found that the patients with CAD were not satisfied with the care provided by doctors [24]. The present study illustrated a significant difference among overall satisfaction , age, gender, marital status and occupational status. It was supported by a study conducted in Turkey in 2013, which demonstrated significant differences among patients' gender, marital status, and occupational status as well as overall medical care services[25]. Additionally, it was in line with a research in Australia which revealed that age and gender were significant with overall satisfaction[26]. conversely, it disagreed with a study performed in Iraq in 2014 that clarified no significant differences between patients' sociodemographic characteristics and overall medical care services[24].



## CONCLUSION

The study illustrated that half of the sample (50.7%) was among the age group 61 years and older. More than half of them (51.2%) were females. About (58%) of the participants were illiterate. The majority of the samples were married (79%). However, most of the study samples were housewives (46.8%) and living in an urban area (47.8%). In conclusion, a substantial proportion of patients were satisfied with medical care, and there was a significant difference between patients' medical care satisfaction and age, gender, marital status, and occupational status.

## CONFLICTS OF INTEREST

The author reports no conflict of interest.

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