

## ORIGINAL ARTICLE

# NURSES' KNOWLEDGE ABOUT CORONARY ARTERY DISEASE IN AL-NASIRIYAH CITY

DOI: 10.36740/WLek202204119

**Marwa Jabbar, Israa Dheyaa, Khulood Abdulmahdi, Ghofran Awda**

NATIONAL UNIVERSITY FOR SCIENCE AND TECHNOLOGY, AL-NASIRIYAH, IRAQ

## ABSTRACT

**The aim:** The present study aims to assess nurses' knowledge between men and women concerning coronary artery disease patients in AL-Nasiriyah City hospitals, and also to measure the percentage of this knowledge.

**Materials and methods:** A descriptive study design to achieve the objectives of the study. The study has been conducted upon a non-probability (purposive) sample of (175) nurses. All nurses who work at the medical department were selected based on the study criteria. The questionnaire has been adopted to meet and achieve the objectives of the study. The questionnaire consists of two parts: part one demographic characteristics for students; part two consists of Nurses' knowledge toward coronary artery disease scales. The validity of the questionnaire has been determined through a panel of experts; Reliability of the Questionnaire was developed by pilot study. The data were analyzed by using (SPSS ver. 24) through the application of descriptive statistics.

**Results:** The results of the study show that the overall nurse's knowledge concerning coronary artery disease majority of the sample have low knowledge with percentage 70%.

**Conclusions:** The study concludes that most gender of the sample is male and most members of the sample have low knowledge of coronary artery disease CAD. The study recommends creating an educational program for newly appointed nurses to increase their knowledge, emphasis on the center for continuing education by conducting continuous courses on coronary artery disease, migrating certificates to a higher certificate through the distinguished channel and increasing their academic achievement.

**KEY WORDS:** Nurses, knowledge, coronary artery disease (CAD)

Wiad Lek. 2022;75(4 p1):853-856

## INTRODUCTION

Coronary artery diseases (CAD), also known as coronary heart disease (CHD) or heart disease (HD) (Wilson and Douglas, 2015) and ischemic heart disease (IHD) [1]. CAD is the most common type of cardiovascular disease (CVD), contributed approximately half of all CVD deaths worldwide. CAD is an important public health problem, among adults with a high morbidity and mortality, and it causes a substantial economic burden to societies [2]. It is the leading cause of death for both men and women. More than half of the deaths due to heart disease in 2015 were in men. Each year about 630,000 Americans die from heart disease that's one in every four deaths, it is killed about 366,000 people in 2015. In the United States, every 40 seconds someone has a heart attack. Each minute, more than one person in the United States dies from a heart disease-related event [3]. CAD is the most common type of cardiovascular diseases & it is the major cause of death approximately 4 million deaths resulting from MI occur around the world annually. Every year about 1.25 million infarctions occur in the United States, 50,000 of which culminate in death [3]. Coronary Artery Disease could lead to heart attacks [4]. The hospitalization rate of the patients with CAD has also increased in the recent years, indicating the increasing incidence and recurrence rates of this disease. Despite hopes in reduction of mortality, the sharp increase in patients' admission is becoming a growing concern [5]. In Iraq, the number of CAD is increased as a health prob-

lem according to hospitals morbidity data provided by Iraqi ministry of health in 2004 shows a 65% increase of the hospital admission due to coronary heart disease and smoke. More than

**Table I.** Socio-demographic variables descriptive statistics of the nurses

| Items                           | Rating            | F.  | %     |
|---------------------------------|-------------------|-----|-------|
| Age                             | 20-29             | 80  | 45.7  |
|                                 | 30-39             | 57  | 32.6  |
|                                 | 40 and above      | 38  | 21.7  |
|                                 | Total             | 175 | 100.0 |
| Gender                          | Male              | 98  | 56.0  |
|                                 | Female            | 77  | 44.0  |
|                                 | Total             | 175 | 100.0 |
| Level of qualification          | Preparatory       | 52  | 29.7  |
|                                 | Institute         | 74  | 42.3  |
|                                 | College           | 49  | 28.0  |
|                                 | Total             | 175 | 100.0 |
| Years of experiences in nursing | Less than 2 years | 61  | 34.9  |
|                                 | 2-10              | 89  | 50.9  |
|                                 | 11 and above      | 25  | 14.3  |
|                                 | Total             | 175 | 100.0 |

**Table II.** Assessment of nurses' knowledge levels toward CAD

| Items   | Rating    | F.  | %     | M.S | Ass. |
|---|-----------|-----|-------|-----|------|
| Coronary arteries arise from...   | Incorrect | 78  | 44.6  | .55 | M    |
|   | Correct   | 97  | 55.4  |     |      |
|   | Total     | 175 | 100.0 |     |      |
| Coronary artery are branches into...  | Incorrect | 66  | 37.7  | .62 | M    |
|   | Correct   | 109 | 62.3  |     |      |
|   | Total     | 175 | 100.0 |     |      |
| Result of accumulation of plaques on the myocardial arteries are called   | Incorrect | 66  | 37.7  | .62 | M    |
|   | Correct   | 109 | 62.3  |     |      |
|   | Total     | 175 | 100.0 |     |      |
| Ischemic coronary arteries mean...  | Incorrect | 54  | 30.9  | .69 | H    |
|   | Correct   | 121 | 69.1  |     |      |
|   | Total     | 175 | 100.0 |     |      |
| Clinical manifestation of coronary artery disease is in from of...  | Incorrect | 66  | 37.7  | .62 | M    |
|   | Correct   | 109 | 62.3  |     |      |
|   | Total     | 175 | 100.0 |     |      |
| Acute chronic coronary arteries syndrome...   | Incorrect | 104 | 59.4  | .41 | M    |
|   | Correct   | 71  | 40.6  |     |      |
|   | Total     | 175 | 100.0 |     |      |
| is a state that affecting heart muscle and causing it is failure leading to impaired cerebral blood supply causing death... | Incorrect | 103 | 58.9  | .41 | M    |
|   | Correct   | 72  | 41.1  |     |      |
|   | Total     | 175 | 100.0 |     |      |
| Rarely fatty deposits forming less than from the artery cavity cause coronary artery blockage symptom...                    | Incorrect | 126 | 72.0  | .28 | L    |
|   | Correct   | 49  | 28.0  |     |      |
|   | Total     | 175 | 100.0 |     |      |
| Risk factors that can be controlled are...  | Incorrect | 109 | 62.3  | .38 | M    |
|   | Correct   | 66  | 37.7  |     |      |
|   | Total     | 175 | 100.0 |     |      |
| Risk factors that can be uncontrolled are...  | Incorrect | 133 | 76.0  | .24 | L    |
|   | Correct   | 42  | 24.0  |     |      |
|   | Total     | 175 | 100.0 |     |      |
| symptoms of coronary artery disease are started when percentage of obstruction is...  | Incorrect | 120 | 68.6  | .31 | L    |
|   | Correct   | 55  | 31.4  |     |      |
|   | Total     | 175 | 100.0 |     |      |
| Diagnosis of coronary artery diseases by risk assessment through...   | Incorrect | 72  | 41.1  | .59 | M    |
|   | Correct   | 103 | 58.9  |     |      |
|   | Total     | 175 | 100.0 |     |      |
| A test for heart function...  | Incorrect | 72  | 41.1  | .59 | M    |
|   | Correct   | 103 | 58.9  |     |      |
|   | Total     | 175 | 100.0 |     |      |
| priorities of nursing intervention of coronary artery patients during pain are...   | Incorrect | 60  | 34.3  | .66 | M    |
|   | Correct   | 115 | 65.7  |     |      |
|   | Total     | 175 | 100.0 |     |      |
| priorities of nursing intervention of coronary artery patients through...   | Incorrect | 61  | 34.9  | .65 | M    |
|   | Correct   | 114 | 65.1  |     |      |
|   | Total     | 175 | 100.0 |     |      |

|  |           |     |       |     |   |
|--|-----------|-----|-------|-----|---|
| Encourage patient to...  | Incorrect | 133 | 76.0  | .24 | L |
|  | Correct   | 42  | 24.0  |     |   |
|  | Total     | 175 | 100.0 |     |   |
| Tell the patient routes of treatment are necessary through...  | Incorrect | 30  | 17.1  | .83 | H |
|  | Correct   | 145 | 82.9  |     |   |
|  | Total     | 175 | 100.0 |     |   |
| Goal of nursing intervention of coronary artery patients is... | Incorrect | 157 | 89.7  | .10 | L |
|  | Correct   | 18  | 10.3  |     |   |
|  | Total     | 175 | 100.0 |     |   |
| The patient can use simple activities gradually after...       | Incorrect | 126 | 72.0  | .28 | L |
|  | Correct   | 49  | 28.0  |     |   |
|  | Total     | 175 | 100.0 |     |   |
| Encourage the patient to...                                    | Incorrect | 42  | 24.0  | .76 | H |
|  | Correct   | 133 | 76.0  |     |   |
|  | Total     | 175 | 100.0 |     |   |

**Table III.** Overall nurses' knowledge toward CAD

|                   | Rating   | Frequency | Percent |
|-------------------|----------|-----------|---------|
| Overall Knowledge | Low      | 49        | 27.8    |
|                   | Moderate | 121       | 68.8    |
|                   | High     | 6         | 3.4     |
|                   | Total    | 175       | 100.0   |

a fivefold increase in outpatient visits with the same diagnosis between 1989 and 1999 [6], and the number of patients who are admitted to Iraqi hospitals in 1989 was 9487 and this number increased in 2010 to 19963 patients [7].

### THE AIM

The present study aims is to assess nurses knowledge between men and women concerning for coronary artery disease patient in AL-Nasiriyah City hospitals, and also to measure the percentage of these knowledge.

### MATERIALS AND METHODS

Descriptive, cross sectional research design is used in this study to assess nurse's knowledge about coronary artery disease. A total of 175 male and female nurses were selected using purposive sampling technique to reduce the sampling error and enhance the representation of target population, all these nurses who work at medical department were selected based on the study criteria, and after obtaining consent from them. Study was conducted at Al-Nasiriya city hospitals. A questionnaire has been adopted from [8] to meet and achieve the objectives of the study. The questionnaire consists of two parts; part one demographic characteristics and part two consist of Nurses' knowledge toward coronary artery disease scales. As validity is concerned with the extent to which an instrument corresponds. The content validity of instrument was established through a panel of (5) experts from different specialties. The results of the review of the questionnaire by the experts revealed that all of

the experts agree that 20 items of the study instrument are clear and adequate for the measurement of the phenomenon. The internal consistency of the instrument was determined through the computation of Alpha Correlation Coefficient (Cronbach's Alpha) and the result was high 0.8 it reflects high level of internal consistency and the instrument is reliable and can be applied.

### RESULTS AND DISCUSSION

According to demographic characteristics of the nurses, table (I) shows that about half of the nurses in the study have ages ranging between 20 and 29, this finding agrees with that of [9] who stated that the participants who were age between 25- 30 years-old constitute the majority. And almost all of the nurses are men gender; this finding is supported by Al-Ftlawy (2010) who stated that the males were more than females [10]. In addition, the highest percent of them have graduated from institute; also Jissir (2015) [11] has reported in his research that associate degree of nurses constitute the majority of participated nurses and more than other groups. Lastly, regarding the years of experience in nursing, the study finding indicated that the highest percentage of nurses in the study group between 2-10 years of experiences. This finding was congruent with that of Al-Ftlawy (2010) who concluded that the years of experience in nursing were 1-9 years which represents the highest percentage of nurses [10]. On the other hand, and concerning levels of knowledge of nurses and as knowledge about coronary artery disease is crucial to nurses' previous studies have showed that nurse's knowledge about coronary artery disease is not high it may be low or moderate as what has been found by this study (table 2 and 3). In fact, there are many factors that effect on nurse's knowledge it may related to some aspects of demographic data like residency, age, etc. [12-13]. Level of qualification or the academic degree is the primary source for building a body of knowledge, results of this study revealed that only (28%) are graduated from college and have baccalaureate degree while the rest (72%) of the nurses are preparatory or institute, this result may explain the difference in level of knowledge which is reflected moderate and low [14].

In this study this level of knowledge is may related to level of qualification and years of experience, in this study nurses' years of experience were 2-10 to half of them followed by 2 years of experience or less which can result in less knowledge that could gained from cumulative experience [15-16].

## CONCLUSIONS

Study concluded that the majority of respondents are in the age group 20-29 and most of the sample participants are males in addition, most of the sample members have academic attainment institute and Most of them have 2-10 years of experience. According to their knowledge there was a low level of knowledge of nurses about coronary artery disease CAD despite the fact that most of them are graduated from college or institute.

## RECOMMENDATIONS

Recommendations of this study based on the result and conclusions are: first, it is a necessity to Create an educational program for newly appointed nurses to increase their knowledge, second, Emphasis on the Center for Continuing Education by conducting continuous courses on coronary artery disease, third, migrating certificates to a higher certificate through the Distinguished channel and increasing their academic achievement.

## REFERENCES

- Bhatia S.K. Biomaterials for clinical applications. New York: Springer. 2010, 283p.
- Huang Y.J., Parry M., Zeng Y. et al. Examination of a nurse-led community-based education and coaching intervention for coronary heart disease high-risk individuals in China. *Asian nursing research*. 2017; 11(3): 187-193.
- Woods S.L., Froelicher E.S., Motzer S.A., Bridges E. *Cardiac nursing*. 5th edition. Philadelphia: Lippincott. 2004, 955p.
- Centers for disease control and prevention (CDC). Heart Disease. Heart Disease Fact Sheet. 2017. <https://www.cdc.gov/HeartDisease/facts.htm> [date access 14.12.2021]
- Cheng Y., Chen K.J., Wang C.J. et al. Secular trends in coronary heart disease mortality, hospitalization rates, and major cardiovascular risk factors in Taiwan, 1971–2001. *International journal of cardiology*. 2005; 100(1): 47-52.
- Hasan Z.N., Hussein M.Q., Haji G.F. Hypertension as a risk factor: is it different in ischemic stroke and acute myocardial infarction comparative cross-sectional study? *International journal of hypertension*. 2011. doi:10.4061/2011/701029.
- Al-Jubouri M. Assessment of stressful life events of adult patients with ischemic heart disease in Baghdad city. Published Thesis, University of Baghdad, College of Nursing. 2012, 107p.
- Selman F.K., Ahmed S.A. Effectiveness of an Educational Program on Nurses' Practices Concerning Nursing Interventions for Patients with Coronary Artery Disease in AL-Nasiriyah Heart Center. *Indian Journal of Public Health Research & Development*. 2018; 9(8).
- Ammouri A.A., Tailakh A., Isac C. et al. Knowledge of coronary heart disease risk factors among a community sample in Oman: Pilot study. *Sultan Qaboos University Medical Journal*. 2016; 16(2):189.
- Al-Ftlawy D.M.H. Determination of nurses' knowledge toward care provided to patients with acute myocardial infarction in Al-Najaf city. *Kufa Journal for Nursing Sciences*. 2012;2(2).
- Jissir SA-R., Hassan H.B. Effectiveness of an educational program on nurses 'knowledge about nosocomial infection: case- control study. *Kufa journal for nursing sciences*. 2015; 5(1).
- Eskandari F., Abdullah K.L., Zainal N.Z., Wong L.P. Use of physical restraint: Nurses' knowledge, attitude, intention and practice and influencing factors. *Journal of clinical nursing*. 2017; 26(23-24): 4479-4488.
- Antman E.M., Lascalzo J. Ischemic heart disease. In AS Fauci et al. (eds.). *Harrison's Principles of Internal Medicine*. 19th edition. New York: McGraw-Hill, Ch. 293. 2015. <https://accessmedicine.mhmedical.com/content.aspx?bookid=1130&sectionid=79743463>. [date access 14.12.2021]
- Alotaibi A., Gholizadeh L., Al-Ganmi A.H.A., Perry L. Factors influencing nurses' knowledge acquisition of diabetes care and its management: A qualitative study. *Journal of clinical nursing*. 2018; 27(23-24): 4340-4352.
- Montayre J., Ramjan L.M., Maneze D. et al. Connecting the dots: The transfer of bioscience knowledge by new graduate nurses to the clinical setting: A qualitative study. *Nurse Education Today*. 2021; 97:104729.
- Simamora R.H., Siregar C.T. Knowledge of Nurses about Prevention of Patient Fall Risk in Inpatient Room of Private Hospital in Medan. *Indian Journal of Public Health Research & Development*. 2019; 10(10).

### ORCID and contributionship:

Marwa Jabbar: 0000-0002-3429-388X <sup>A-F</sup>

Israa Dheyaa: 0000-0003-3655-8658 <sup>A-F</sup>

Khulood Abdulmahdi: 0000-0002-0330-2747 <sup>A-F</sup>

Ghofran Awda: 0000-0002-2612-615X <sup>A-F</sup>

### Conflict of interest:

The Authors declare no conflict of interest.

## CORRESPONDING AUTHOR

Marwa Jabbar

National University for Science and Technology

Nasiriyah-Al-Mortatha Street, Nasiriyah, Iraq

e-mail: marwa-j.saiwan@nust.edu.iq

Received: 14.08.2021

Accepted: 08.03.2022

A – Work concept and design, B – Data collection and analysis, C – Responsibility for statistical analysis,

D – Writing the article, E – Critical review, F – Final approval of the article