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Nurses' Knowledge Concerning Evidence-Based Nursing Care of Patients with Myocardial Infarction

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ABSTRACT

Background: Myocardial infarction (MI) is a serious, life-threatening condition requiring prompt nursing care to improve patient outcomes. Nurses play a vital role in the management of patients with myocardial infarction. However, their knowledge and attitudes can significantly impact how they provide care to these patients. Quality nursing care for patients with myocardial infarction is realized following evidence-based practice and nurses' willingness to adjust nursing practice as new evidence emerges.

Study aims: to assess nurses' knowledge and attitudes regarding managing patients with acute coronary syndrome. The article also states nurses' role in managing acute coronary syndrome and their knowledge and attitudes regarding treatment plans for myocardial infarction.

Methodology: A descriptive cross-sectional study design was conducted at Al-Najaf City in the southern region of Iraq in Al-Najaf Teaching Hospital from February 24th, 2021, to March 20th, 2021, in order to assess the nurses' knowledge concerning basic life support. The data collection used the Modified MI Response Questionnaire, the sampling technique being non-probability purposive recruit 100 nurses from CCUs and medical wards from a multi-specialty teaching hospital that participated in the study. It comprised two sections., demographic data (age, gender, professional qualification, and years of experience) and knowledge related to myocardial infarction. The validity of the questionnaire was carried out by seeking opinions from experts.

Results: indicate that the overall level of nurses' knowledge is moderate. Specifically, nurses scored an average of 1.25 (32%) in general knowledge about myocardial infarction, 1.32 (39%) in nursing care specific to myocardial infarction, and 1.18 (29%) in general nursing knowledge. The total reflects a moderate understanding across all aspects assessed.

Conclusion: The findings revealed that nurses had relatively moderate knowledge about managing evidence-based nursing care for patients with myocardial infarction.

INTRODUCTION

Acute coronary syndrome (ACS) is the premier cause of fatality globally. About 30 to 40% of all deaths occur in Iraq due to cardiovascular disease. Myocardial infarction (MI) is one of the most common coronary heart lesions, an invisible epidemic in the 21st century, with prevalence approaching three million people worldwide, with more than one million deaths in the United States annually. Thus, changes in healthcare delivery and increased awareness of the urgency of treating patients with acute coronary syndrome have led to the provision of thrombolysis in the emergency room (ER) rather than the coronary care unit (CCU). Nurses

play a vital role in the management of patients with ACS. The care of patients with ACS involves extensive monitoring and regular data analysis to obtain situational awareness of the patient's evolution and risk for complications. However, constant in the management of the patient with myocardial infarction is the commitment of the nursing to an evidence-based holistic approach (Alkhaqani & Ali, 2022).

Acute myocardial infarction (MI) is one of the leading causes of death in the developed world. Since it is an emergency disease, if not treated on time, it may lead to permanent injury or death of the heart muscle. A retrospective study documented that MI rates increase progressively with increased coronary artery disease (CAD), ranging from 0.11% among patients with no apparent CAD to 2.47% among patients with symptomatic CAD. The prevalence of the disease approaches three million people worldwide, with more than one million deaths. Acute myocardial infarction is one of the leading causes of death in the developed world. Acute myocardial infarction can be divided into non-ST-segment elevation MI (NSTEMI) and ST-segment elevation MI (STEMI). Unstable angina is similar to NSTEMI. However, cardiac markers are not elevated (Ojha et al., 2021).

As far as acute myocardial infarction is concerned, it mainly refers to the situation in which the coronary blood supply drops sharply or is interrupted in the case of coronary artery disease, leading to myocardial ischemic necrosis. The patients are mostly elderly. After the onset, it is usually accompanied by arrhythmia, heart failure, and other adverse conditions, negatively impacting the patient's life, health, and quality of life. In this case, promoting the recovery of patients with acute myocardial infarction and improving their quality of life are important components of clinical development (Gao, 2021).

The first few hours are of utmost importance for limiting infarction size and preventing cardiac death in patients with acute myocardial infarction (AMI). Therefore, it is important to decrease the time from symptom onset until the start of treatment for patients with AMI- symptoms. However, the focus has often been on reducing "doctor's delay" rather than "patient's delay". The patients' decision time is crucial to the total delay and has not changed for decades (Henriksson et al., 2011). Due to the severity of the condition and critical status of the patients, qualified healthcare providers must supervise the initial hours of admission, among which are nurses, who are the closest to the patient. Myocardial infarction is a serious disease that demands standardized care protocols and policies for nurses to achieve good outcomes through better care (Tesfamichael et al., 2021). Nurses are often the first responders to ACS. They need to know how to recognize and deal with ACS patients. Nurses also need to understand their role in the management of these patients and how they should take charge in situations where they don't have a physician around them (Alkhaqani, 2022). The study aims to assess nurses' knowledge and attitudes regarding the care management of patients with myocardial infarction also states the role that nurses play in the management of acute coronary syndrome and their knowledge.

METHODOLOGY

Study Design: A descriptive cross-sectional study that used quantitative approaches was conducted at Al-Najaf City in the southern region of Iraq in Al-Najaf Teaching Hospital from February 24th, 2021, to March 20th, 2021, in order to assess the nurses' knowledge concerning evidence-based nursing care of patients with myocardial infarction.

Population and Study Sample: The participants in the study included approximately two hundred nurses who were graduates and had been in the clinical area setting. Nurses can describe their experiences well because they are still transitioning from college training into their places of work. Additionally, the participants must have worked for not less than six months. This was put in place to obtain data from individuals with some nurse experience. Participants can describe the experiences and challenges encountered in the clinical area until the time of the survey. Nurses who have not worked in the critical care unit for more than one year were excluded. A non-probability convenience sampling technique was used to select 180 nurses working in male and female medical wards, the coronary care unit, an intensive care unit, and the respiratory care unit in Al-Najaf Teaching Hospital. The study population is all nurses who work at Al-Najaf Teaching Hospital. The total number of eligible nurses during the study period was 100, and all of them were targeted.

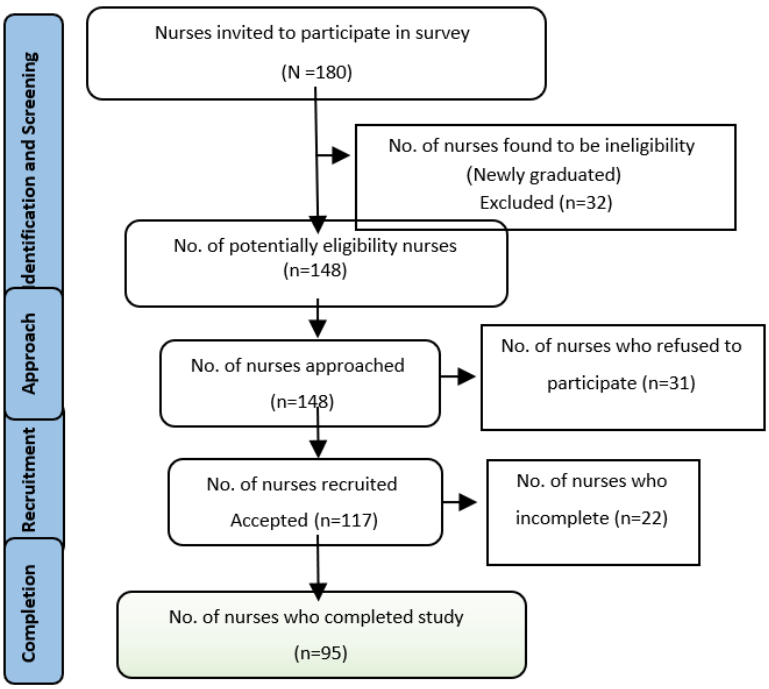

Figure 1. Flowchart of the study participants

Data Collection Tool and Method

The researcher designed a semi-structured survey questionnaire for the purpose of the present study. It contained two parts. The questionnaire had two parts; the first part explored socio-demographic characteristics, including age, gender, educational level, working area, and experience level. The second part assessed participants' knowledge and attitudes regarding nursing care of patients with myocardial infarction, including opinions about the necessity of myocardial infarction; it also assessed the awareness and knowledge about myocardial infarction and included 24 multiple-answer questions, which were further grouped into 7 sections namely signs and symptoms, risk factors, diagnostic measures, management, complication, nursing education, and counseling. These researchers administered the questionnaire was estimated to take between 5 to 10 minutes. The rating scale categorized the level of knowledge as very good (≥75), good (60 – 74), average (50 – 59), and poor (< 50). The questionnaire underwent content and face validity to assess the relevance of all the items and the clarity of the content. Further, internal consistency was analyzed by calculating Cronbach's alpha. Data was collected over a period of 20 days to allow participants the opportunity to respond at their convenience. The researcher used a survey created using Survey Google Forms. Only subjects who consented to participate in the survey were given access to the survey in Google form.

The authors of this study are the primary source of a structured questionnaire developed after intense deliberations and panel discussions with experts using their varied professional backgrounds, experiences in similar studies, and their interconnection with global professional associations; hence, a decision was made to implement the questionnaire as an original document purposely for this study. This was a structured questionnaire with close-ended questions which the researchers administered. A pretest was done in a randomly selected district hospital where nine nurses were selected to assess the respondents, view the questions, and clarify.

The question of validity is if there is evidence to support the claim, which is answered by the survey of educated nursing professionals. The study is reliable, as the responses were consistent but lacked methods to measure variables. The researcher determined the need for a pilot study in future studies to identify the possible individual and organizational factors that may influence new graduates' competency. Said pilot study would provide a listing to include individual and organizational factors but provide subjects with "other" categories to allow them to indicate any other possible factors that could influence the study. After reviewing the validity and reliability of the data, a future survey to be completed would further determine nursing professionals' levels of knowledge and practice regarding basic life support. Recommendations to the demographics study would be to delineate between types of nursing educational programs affiliated. Additionally, the researcher constructed the survey questions to allow the response to include an explanation.

Statistical methods

Data cleaning was performed to check for accuracy and consistency and to avoid missed values before data entry. Descriptive demographic characteristics were analyzed using frequency, percentage, mean (SD), median, and interquartile range (IQR) as appropriate. The data was graded according to the percentage. Chi uses descriptive and inferential statistics. The chi-square test was used to determine the association of the knowledge grades with used to determine the association of the knowledge the nurses'

demographic characteristics. The difference in the level of knowledge among the different socio-demographic groups was assessed using statistical methods, such as a t-test and Kruskal Wallis one-way ANOVA. The result was tested at a significance level of 0.05. The data analysis process entailed using the Statistical Package for Social Sciences computer software to categorize information in graphs and charts created by SPSS. Statistical analysis was performed using Statistical Package for Social Sciences version 24.0 for Windows (SPSS Inc., Chicago, IL, USA). Descriptive statistics were used to present the demographic data and patterns of answers to the different questionnaire items; categorical variables were presented as frequency and percentage, whereas numerical ones were presented as mean ± standard deviation (S.D).

Ethical committee: approval and appropriate permission were obtained from the hospital authority. Informed consent was obtained from the participants. The responses to the questionnaire were analyzed after scoring them. The correct answer was given one score after scoring them. The correct answer was given one score, including those with multiple answers and then the scores answer, and then the scores were graded according to the percentage.

RESULT

Table 1: Socio-demographic characteristics of the nurses (study sample)

Variable		Frequency	Percent (%)
Age (years)	23-28	35	36.8
	29-34	15	15.8
	35-40	10	10.5
	41-46	25	26.3
	47-52	10	10.5
Gender	Male	50	52.6
	Female	45	47.4
Area of work	RCU	20	21.1
	ICU	15	15.8
	CCU	10	10.5
	Wards	50	52.6
Experience Years	1-5	55	57.9
	6-10	15	15.8
	11-15	25	26.3
Training sessions in cardiac care nursing	Yes	50	52.6
	No	45	47.4
Nursing Professional Qualification	Bachelor	25	26.3
	Diploma	25	26.3
	Graduated secondary school	45	47.4
	Total	**95**	**100.0**

The table (1) presents a demographic and professional overview of a group of 95 individuals. The majority are relatively young, with 36.8% aged between 23-28 years and a significant portion (26.3%) falling within the 41-46 age range. The gender distribution is nearly even, with males slightly outnumbering females at 52.6% and 47.4%, respectively. Most participants work in general wards (52.6%), while smaller numbers are employed in more specialized areas such as the RCU, ICU, and CCU. Experience levels vary, but the majority (57.9%) have between 1-and 5 years of experience, indicating a relatively inexperienced workforce. Just over half (52.6%) have received training in cardiac care nursing, highlighting a need for further training opportunities in this area. Regarding qualifications, nearly half of the participants have only completed secondary school (47.4%), with the rest holding either a Bachelor's degree or a Diploma (26.3% each). This data suggests a young, relatively inexperienced workforce with varying educational backgrounds, which may impact their ability to perform specialized nursing tasks.

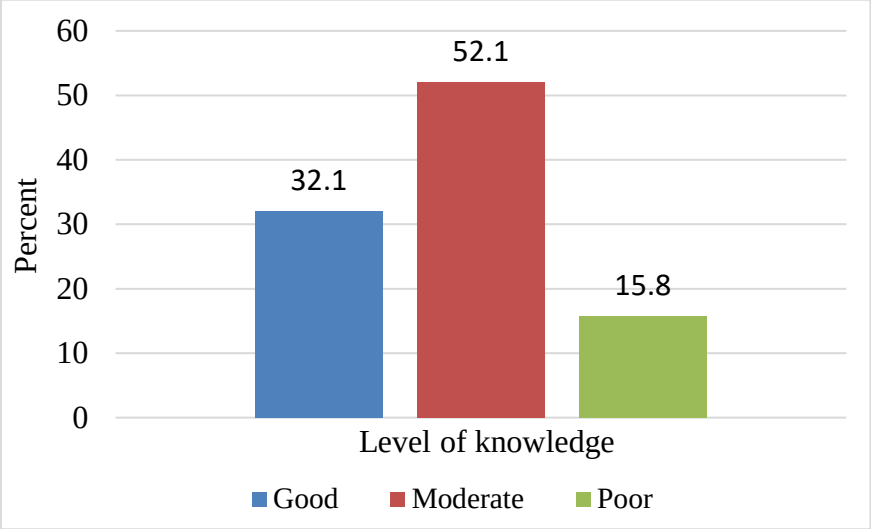

Figure 1. Description overall of the level of nurses' knowledge about MI

Table 2: Level of nurses' knowledge regarding Acute M.I for each aspect

Knowledge	Scores Mean	Percentage	Assess
General knowledge about myocardial infarction	1.25	32%	Moderate
knowledge regarding the nursing care for myocardial infarction	1.32	39%	Moderate
General nursing knowledge	1.18	29%	Moderate
Total	**1.25**	**100%**	**Moderate**

Poor= 0-1, Moderate= 1.1-2, Good= 2.1-3

Table (2) summarizes the level of nurses' knowledge regarding acute myocardial infarction (MI) across various aspects. The mean scores indicate that overall knowledge in this area is moderate. Specifically, nurses scored an average of 1.25 (32%) in general knowledge about myocardial infarction, 1.32 (39%) in nursing care specific to myocardial infarction, and 1.18 (29%) in general nursing knowledge. The total score of 1.25 reflects a moderate understanding across all aspects assessed.

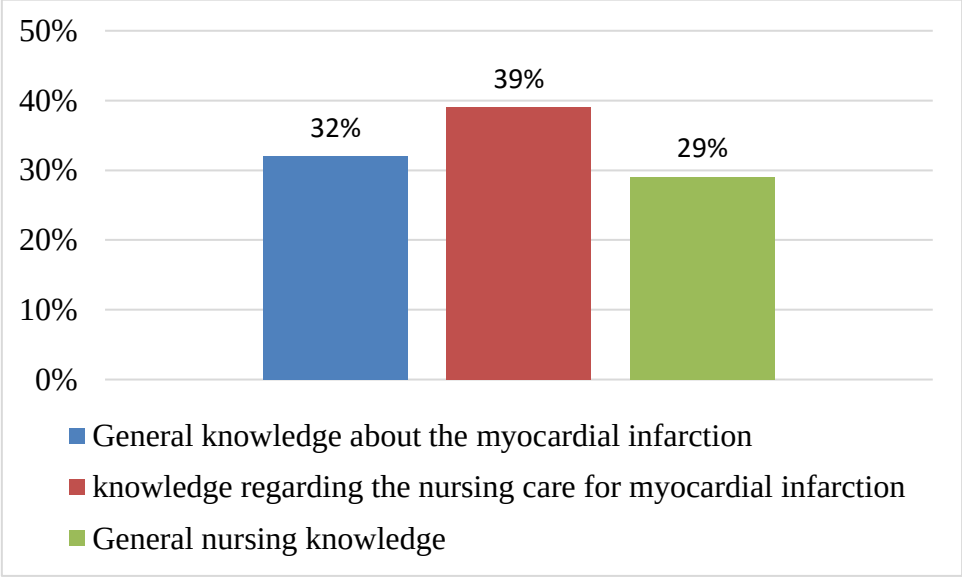

Figure 2. Description of each aspect level of nurses' knowledge

Table 3: Association between nurses' knowledge scores and demographic characteristics

		Grading of level Knowledge Score			
Variable		**Good**	**Moderate**	**Poor**	**P-value**
Age (years)	23-28	15	20	0	0.80
	29-34	5	0	10	

	35-40	0	10	0	
	41-46	15	10	0	
	47-52	5	0	5	
Gender	Male	20	15	15	0.17
	Female	20	15	0	
Area of work	RCU	5	5	10	0.26
	ICU	5	10	0	
	CCU	10	0	0	
	Wards	20	25	5	
Experience Years	1-5	20	25	10	0.04
	6-10	10	5	0	
	11-15	10	10	5	
Training Sessions	Yes	30	10	10	0.11
	No	10	30	5	
Nurses Professional Qualification	Bachelor	15	10	0	0.03
	Diploma	5	10	10	
	Graduated secondary school	20	20	5	
		Total	**95**	**100.0**	

Table (3) examines the association between nurses' knowledge scores on acute myocardial infarction (MI) and their demographic characteristics. The analysis reveals several key insights. Age does not appear to significantly influence knowledge levels, as indicated by a P-value of 0.80. However, the distribution shows that younger nurses (23-28 years) and those aged 41-46 tend to have better or moderate knowledge, while those aged 29-34 and 47-52 are more likely to score poorly. Gender differences are also not statistically significant (P-value of 0.17), though it is notable that no female nurses scored poorly, whereas 15 male nurses did. Regarding the area of work, there is no significant association (P-value of 0.26), but those working inwards exhibit a wider range of knowledge levels, with some scoring poorly. Experience plays a more critical role, with a P-value of 0.04 indicating a significant association. Nurses with 1-5 years of experience tend to score across the spectrum, while those with more than 10 years of experience generally have better or moderate knowledge. Training sessions also show a non-significant trend (P-value of 0.11), though nurses who have undergone training are more likely to have good knowledge scores. Lastly, the level of professional qualification is significantly associated with knowledge scores (P-value of 0.03). Nurses with a Bachelor's degree tend to have better knowledge, while those with a Diploma are more likely to score poorly.

This table suggests that while some demographic factors, such as experience and professional qualifications, significantly impact knowledge levels, other factors like age, gender, and work area show weaker or non-significant associations.

DISCUSSION

According to Watson`s and Nola Pender`s nursing theories, nurses should be equipped with sound knowledge and theoretical bases for health promotion, enabling them to help individuals, families, and communities stay healthy. Nurses must incorporate scientific knowledge and technical advances into their practice to assist the patients in remaining well and functioning at the maximum level. Scientific and technological advancements in critical care units demand that nurses upgrade their knowledge to identify life-threatening arrhythmias using electrocardiograms and perform emergency resuscitation measures. This study aimed to explore nurses' knowledge about acute coronary syndrome and their attitudes toward the care management of patients with acute coronary syndrome. To achieve high-quality nursing care and manage acute myocardial infarction, patients must follow evidence-based nursing practice, and nurses' are willing to modify nursing practice when new evidence emerges. The comprehensive care and management framework for a patient with acute myocardial infarction includes a comprehensive nursing assessment, diagnosis, planning, intervention, and assessment process (Alkhaqani & Ali, 2022).

Nurses should understand evidence-based practices for the care of patients with MI. This includes knowledge of the latest clinical practice guidelines and research-based interventions that improve patient outcomes (Mechanic et al., 2021). Nurses should be aware of the barriers that can impede the implementation of evidence-based nursing care, such as a lack of resources, time, and knowledge (Shabbir et al., 2021). They should also be willing to advocate for the necessary resources and support to implement evidence-based practices in their clinical setting (Miao et al., 2020).

This study investigated the knowledge and attitudes of front-line coronary care nurses. The researchers found that while some nurses were knowledgeable about treatment options for patients with ACS, more than half did not know what treatments were appropriate for ACS patients. They also found that most nurses didn't know how to make a differential diagnosis between ACS and other chest pain syndromes.

The demographic and professional overview of this group of 95 nurses highlights several key areas that could impact their effectiveness in specialized nursing tasks, particularly in cardiac care. The relatively young workforce age, with a significant proportion (36.8%) aged between 23-28 years, coupled with a majority having only 1-5 years of experience, suggests that many are still early in their careers the results agree with study that done by (Alfasfos et al., 2016). This inexperience could limit their ability to manage complex cases, as more seasoned nurses often bring a depth of knowledge and practical skills acquired over time. This is supported by evidence from studies like that conducted by (Tesfamichael et al., 2021), which found that more experienced nurses tend to deliver higher-quality care and better patient outcomes.

The gender distribution is balanced, and while this might suggest a diverse workforce, the varying areas of work and levels of specialization highlight potential gaps. Most participants work in general wards (52.6%), where the need for specialized cardiac care knowledge might be less pressing compared to more critical areas like the ICU or CCU. However, the fact that only just over half (52.6%) have received training in cardiac care nursing is concerning. According to research by Brusco et al. (2019), continuous training, particularly in high-risk areas like cardiac care, is crucial for maintaining high standards of patient care. The mixed educational background, with nearly half only having completed secondary school, further underscores the need for ongoing professional development. Studies have shown that higher education levels among nurses are linked to better clinical outcomes (Blegen et al., 2013), suggesting that this workforce may benefit from additional educational opportunities to enhance their competencies in specialized areas like cardiac care. These findings indicate a need for targeted interventions to support this relatively young and inexperienced workforce in developing the skills necessary for high-quality, specialized nursing care.

The present results an evaluation of nurses' knowledge levels regarding Acute Myocardial Infarction (MI) across various aspects. Overall, the nurses demonstrated a moderate level of knowledge. Specifically, knowledge pertaining to nursing care for MI scored the highest among the categories, with a mean of **1.32** and a percentage of **39%**, indicating a relatively better understanding in this area. General knowledge about MI had a mean score of **1.25**, accounting for **32%**, while general nursing knowledge scored the lowest. The present study's findings indicate that nurses' knowledge regarding acute myocardial infarction (MI) is generally at a moderate level across all assessed areas. Specifically, the nurses moderately understand general MI knowledge, nursing care for MI, and general nursing knowledge. These findings are consistent with other studies highlighting gaps in nurses' knowledge of cardiovascular care, particularly in acute settings. The results agree with a study conducted by Alqahtani et al. (2021), which found that while nurses demonstrated basic knowledge of MI, their understanding of advanced management and specific care protocols was limited, potentially impacting patient outcomes. Similarly, a study by Hwang and Kim (2020) emphasized the need for ongoing education and training to enhance nurses' competencies in cardiac care, as moderate knowledge levels could lead to suboptimal care delivery. The moderate scores observed in this study underscore the importance of continuous professional development and targeted training programs to ensure nurses are well-equipped to manage acute MI effectively, ultimately improving patient care and outcomes.

Table (3) examines the association between nurses' knowledge scores on acute myocardial infarction (MI) and their demographic characteristics. The analysis reveals several key insights. Overall, this result suggests that while some demographic factors, such as experience and professional qualifications, significantly impact knowledge levels, other factors like age, gender, and work area show weaker or non-significant associations.

These findings suggest that while nurses have a foundational understanding of Acute MI and its care, there is considerable room for improvement across all areas. Enhancing educational and training programs focused on MI could be beneficial in elevating knowledge levels, thereby improving patient care outcomes and ensuring more effective management of patients suffering from myocardial infarction.

CONCLUSION

The findings revealed that nurses had relatively moderate knowledge about the management of acute coronary syndrome. This study also revealed that knowledge about ACS is important for nurses to make appropriate decisions when providing care management for ACS patients. Nurses need to know what acute coronary syndrome is and how to deal with it. They are in high demand. Nurses should be better prepared to care for patients with Acute Coronary Syndrome.

RECOMMENDATION

Due to global and regional trends, MI has become a common medical problem in Iraq that requires urgent action in the emergency unit and ICU. Nurses' knowledge and attitudes regarding evidence-based nursing care of patients with MI are essential for providing high-quality care. Nurses should have an understanding of evidence-based practices, the skills to apply research to their practice, a positive attitude toward evidence-based nursing care, a collaborative approach, and an awareness of the barriers that can impede the implementation of evidence-based practices. Ongoing education and training can help nurses stay up-to-date with the latest research and evidence-based practices and integrate them into their clinical practice to improve patient outcomes.

Nurses should have a positive attitude toward evidence-based nursing care. They should believe that evidence-based nursing care is essential for improving patient outcomes and be willing to implement evidence-based practices in their clinical practice. Nurses

should have a collaborative approach to care, working with other healthcare professionals to ensure that evidence-based practices are integrated into care plans. They should also be willing to seek out and collaborate with experts in the field to stay up-to-date with the latest research and evidence-based practices.

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REFERENCES

1. Alfasfos, N., Darawad, M. W., Nofal, B., Samarkandi, O. A., & Abdulqader, B. (2016). *Knowledge , Attitudes , Beliefs and Perceived Risk of Acute Coronary Syndrome among Jordanian Patients*. 1830–1844. https://doi.org/10.4236/health.2016.815175
2. Alkhaqani, A. L. (2022). Nurses' knowledge and skills concerning cardiopulmonary resuscitation: a descriptive study. *Nursing Communications*, *6*(0), e2022031. https://doi.org/10.53388/in2022031
3. Alkhaqani, A. L., & Ali, B. R. M. (2022). Evidence-based nursing care of patient with acute myocardial infarction : Case report. *International Journal of Nursing and Health Sciences*, *4*(1), 1–7.
4. Gao, J. (2021). Evaluation of the Effect of Nursing Intervention on the Curative Effect and Living Ability of Elderly Patients with Myocardial Infarction. *E3S Web of Conferences*, *271*, 03043. https://doi.org/10.1051/e3sconf/202127103043
5. Henriksson, C., Larsson, M., Arnetz, J., Berglin-Jarlöv, M., Herlitz, J., Karlsson, J. E., Svensson, L., Thuresson, M., Zedigh, C., Wernroth, L., & Lindahl, B. (2011). Knowledge and attitudes toward seeking medical care for AMI-symptoms. *International Journal of Cardiology*, *147*(2), 224–227. https://doi.org/10.1016/j.ijcard.2009.08.019
6. Mechanic, O., Gavin, M., Grossman, S., Ziegler, K., & Kornusky, J. (2021). Acute myocardial infarction. *The Cardiology Intensive Board Review: Third Edition*, 54–69.
7. Miao, A., Qu, Q., Wang, L., Qian, H., Pan, L., Wu, J., Zhou, X., & Xie, X. (2020). The efficacy of evidence-based nursing for patients with myocardial infarction complicated by heart failure. *International Journal of Clinical and Experimental Medicine*, *13*(3), 1837–1843.
8. Ojha, N., Dhamoon, A. S., & Chapagain, R. (2021). Myocardial Infarction (Nursing). In *StatPearls*. http://www.ncbi.nlm.nih.gov/pubmed/33760446
9. Shabbir, K., Javeed, W., Kazmi, A., Shereen, M. A., & Bashir, N. (2021). Knowledge about Acute Myocardial Infarction (AMI) and attitudes to medical care seeking—A comparison between patients and the general public Catrin. *Asian Journal of Health Sciences*, *7*(1), ID19. https://doi.org/10.15419/ajhs.v7i1.480
10. Tesfamichael, S. A., Antonysamy, R., Schulz-stuebner, S., Gebreyohannes, G., Simel, L. L., & Tesfamariam, E. H. (2021). Initial Management of Myocardial Infarction Among Nurses in the Critical Care Units at Orotta & Halibet National Referral Hospitals , Asmara , Eritrea. *American Journal of Nursing and Health Sciences 2021;*, *2*(1), 6–17. https://doi.org/10.11648/j.ajnhs.20210201.12