

KNOWLEDGE, ATTITUDE AND ASSOCIATED FACTORS TOWARDS HEART FAILURE MANAGEMENT  
AMONG NURSES WORKING IN CARDIAC UNITS

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**Abstract:** Heart failure is a growing public health concern in Pakistan, with nurses playing a pivotal role in its management. Effective knowledge and attitudes among nurses are crucial for optimizing patient outcomes and reducing complications. This study aimed to assess the knowledge, attitudes, and associated factors regarding heart failure management among nurses in tertiary care hospitals. **Methods:** A descriptive cross-sectional study was conducted among 130 nurses working in cardiac care units and ICUs of tertiary care hospitals in Lahore, Pakistan. Participants were selected using convenience sampling. Data were collected through a validated structured questionnaire, which included demographic information, knowledge assessment, and attitudes toward heart failure management. Statistical analysis was performed using SPSS version 26, employing descriptive and inferential methods to evaluate trends and associations. **Results:** The majority of nurses (66.9%) correctly identified common symptoms of heart failure, such as coughing and nausea. However, gaps were observed in recognizing specific indicators, such as abdominal swelling as a sign of fluid retention (60.1%). Positive attitudes toward heart failure management were prevalent, with 58.5% strongly agreeing on the critical role of nursing care in influencing patient outcomes. Practices, such as consistent ECG monitoring (48.0%) and proper patient positioning (36.7%), were suboptimal. Significant associations were found between education level, years of experience, and competency levels ( $p < 0.05$ ). **Conclusion:** While nurses exhibited adequate knowledge and positive attitudes toward heart failure management, significant gaps in practice adherence and specific knowledge areas were identified. Structured training programs, regular competency assessments, and evidence-based practice interventions are essential to address these deficiencies and enhance patient care in cardiac units.

**Keywords:** Heart Failure, Nursing Knowledge, Nursing Attitudes, Cardiac Care, Patient Outcomes, Pakistan

## Introduction

Heart failure is a chronic, progressive condition that poses a significant burden on healthcare systems worldwide, particularly in low- and middle-income countries such as Pakistan. It is characterized by the inability of the heart to pump blood efficiently, leading to debilitating symptoms such as dyspnea, fatigue, and fluid retention. Effective management of heart failure requires a multidisciplinary approach, with nurses playing a central role in patient monitoring, education, and adherence to evidence-based practices (1, 2).

In Pakistan, the prevalence of heart failure is increasing due to a rise in associated risk factors such as hypertension, diabetes, and ischemic heart disease. According to recent statistics, cardiovascular diseases account for approximately 30% of all deaths in Pakistan, making them a leading cause of mortality (3). This growing burden has amplified the need for specialized cardiac care units and trained nursing professionals capable of managing heart failure patients effectively (4).

Globally, studies have highlighted the importance of nursing knowledge and attitudes in improving heart failure management. Nurses are often the first point of contact for patients and play a crucial role in early detection of symptoms, patient education, and ensuring adherence to treatment regimens. Research in developed countries has shown that well-informed nurses significantly contribute to reducing hospital readmissions and improving quality of life for heart failure patients (5, 6). However, in resource-

limited settings like Pakistan, gaps in knowledge and attitudes toward heart failure management are common, often due to insufficient training, lack of standardized protocols, and high patient-to-nurse ratios (7, 8). Locally, few studies have investigated the knowledge and attitudes of nurses regarding heart failure management. Ahmed et al. reported that while most nurses were aware of basic management strategies, many lacked understanding of specific interventions such as fluid restriction and symptom monitoring (9). Another study by Rehman et al. highlighted the need for targeted training programs to address these gaps and enhance nursing competencies in cardiac care (10). Given the critical role of nurses in managing heart failure, assessing their knowledge and attitudes is essential for identifying gaps and designing interventions to improve care quality. This study aims to evaluate the knowledge and attitudes of nurses in tertiary care hospitals in Lahore, Pakistan, regarding heart failure management. The findings will provide insights into current practices and inform the development of evidence-based training programs to enhance nursing care and patient outcomes in the local context.

## Methodology

The study employed a descriptive cross-sectional design to assess the knowledge and attitudes of nurses regarding heart failure management in tertiary care hospitals in Lahore, Pakistan. This design was chosen to provide a



comprehensive snapshot of nurses' understanding and perspectives on heart failure care at a specific point in time. The study population comprised nurses working in cardiac care units and cardiac ICUs. A total of 130 nurses participated in the study, selected using convenience sampling. Inclusion criteria included registered nurses with at least one year of experience in cardiac units, while those on extended leave or unwilling to participate were excluded. The sample size was determined to ensure adequate representation and statistical reliability.

Data were collected using a structured questionnaire, which was developed based on existing literature and validated by a panel of experts in cardiology and nursing. The questionnaire consisted of three sections: demographic information, knowledge assessment, and attitudes toward heart failure management. Demographic data included age, gender, marital status, years of experience, educational qualifications, and current department. The knowledge section evaluated nurses' understanding of heart failure symptoms, risk factors, management strategies, and monitoring protocols. The attitudes section employed a Likert scale to measure nurses' perspectives on the importance of nursing care, health education, and environmental factors in managing heart failure patients.

Ethical approval was obtained from the institutional review board of the participating hospitals before the commencement of the study. Participants were briefed about the study's objectives, and written informed consent was secured. Anonymity and confidentiality were maintained throughout the research process. The data collection was conducted during working hours, with questionnaires distributed to nurses in their respective units. Research assistants were available to provide clarification and ensure the completeness of responses.

Data analysis was performed using SPSS version 26. Descriptive statistics, including frequencies and percentages, were used to summarize demographic characteristics, knowledge, and attitudes. Inferential statistics, such as chi-square tests, were employed to identify associations between demographic variables and knowledge or attitude scores. The reliability of the

questionnaire was assessed using Cronbach's alpha, with a value of 0.85 indicating high internal consistency.

**Results**

This study aimed to evaluate the knowledge, attitudes, and associated factors regarding heart failure management among nurses working in cardiac units in tertiary care hospitals. The study included 130 participants. The majority were aged between 26–30 years (47.7%), female (90.8%), and married (80.0%). Most nurses had 1–5 years of professional experience (62.3%) and held a Post RN qualification (55.4%). A significant proportion worked in the cardiac care unit (60%). These details are summarized in Table 1.

**Knowledge Regarding Heart Failure Management**

The knowledge assessment revealed that most participants demonstrated an understanding of the symptoms and management of heart failure. For example, 66.9% identified coughing and nausea as common symptoms of advanced heart failure, and 62.3% correctly recognized the need for obtaining daily weights for symptom monitoring. However, gaps in specific areas of knowledge, such as fluid retention signs and exercise recommendations, were observed. These findings are detailed in Table 2.

The majority of participants exhibited positive attitudes toward heart failure management. For instance, 58.5% strongly agreed that nursing care directly affects patients' physical and mental health, and 52.3% agreed that preventing noise around the patient improves outcomes. However, a small percentage (16.9%) maintained a neutral stance on these issues. These findings are detailed in Table 3.

The findings indicate that nurses possess a satisfactory level of knowledge and positive attitudes toward heart failure management. However, gaps in specific areas of knowledge and neutral stances on some aspects of care suggest the need for targeted education and training programs to enhance competencies and ensure evidence-based practice.

**Table 1: Demographic Characteristics of Participants**

Variable	Category	Frequency (n)	Percentage (%)
Age	20–25 years	39	30.0
	26–30 years	62	47.7
	31–35 years	27	20.8
	36–40 years	2	1.5
Gender	Male	7	5.4
	Female	118	90.8
Marital Status	Single	20	15.4
	Married	110	80.0
Experience	1–5 years	81	62.3
	6–10 years	49	37.7
Qualification	Diploma in Nursing	46	34.4
	Post RN	72	55.4
	BSN (Generic)	12	9.2
Department	Cardiac care unit	78	60.0
	Cardiac ICU	52	40.0

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**Table 2: Knowledge of Heart Failure Management**

Question	Response	Frequency (n)	Percentage (%)
Coughing and nausea as common symptoms	Yes	87	66.9
	No	43	33.1
Heart failure patients should avoid exercise	Yes	78	60.0
	No	52	40.0
Swelling of the abdomen indicates fluid retention	Yes	80	60.1
	No	50	38.5
Daily weighing is unnecessary once symptoms disappear	Yes	81	62.3
	No	49	37.7

**Table 3: Attitudes toward Heart Failure Management**

Question	Response	Frequency (n)	Percentage (%)
Nursing care directly affects patients' health	Neutral	15	11.5
	Agree	39	30.0
	Strongly Agree	76	58.5
Preventing noise improves heart condition	Neutral	22	16.9
	Agree	68	52.3
	Strongly Agree	35	26.9
Health education is important for patients	Neutral	33	25.4
	Agree	54	41.5
	Strongly Agree	40	30.8

**Discussion**

This study evaluated the knowledge and attitudes of nurses regarding heart failure management in tertiary care hospitals in Lahore, Pakistan. The findings highlighted both strengths and gaps in nurses' understanding and practices, with significant implications for patient care. Comparing these results with past studies provides valuable insights into the current state of nursing competencies and areas requiring improvement.

The majority of nurses demonstrated adequate knowledge of common heart failure symptoms, such as coughing and nausea, with 66.9% correctly identifying these indicators. This finding aligns with a study by Ahmed et al., which reported similar awareness levels among nurses in tertiary care hospitals in Karachi, where 65% were knowledgeable about basic heart failure symptoms (11). However, gaps in understanding specific indicators, such as the implications of abdominal swelling as a sign of fluid retention, mirror the findings of Gupta et al., who noted that 40% of nurses in Indian cardiac units lacked awareness of less obvious symptoms (12).

In terms of practices, only 36.7% of nurses consistently maintained proper patient positioning, a critical component of heart failure management. This is lower than the 50% compliance rate reported by Mwita and Marwa in African cardiac care settings, where regular training and audits improved adherence to standard practices (13). Similarly, only 48.0% of nurses in this study consistently monitored ECGs post-procedure, highlighting a critical area for improvement. Malik et al. emphasized the importance of ECG monitoring, reporting that 70% of nurses in their study associated effective monitoring with improved patient outcomes (14).

Attitudinally, most nurses displayed positive perspectives, with 58.5% strongly agreeing that nursing care directly impacts patient health. This is consistent with Johnson et al., who found that 60% of UK nurses strongly acknowledged

their role in influencing heart failure outcomes (15). However, the neutral stance maintained by a small proportion of nurses in this study (16.9%) reflects a potential lack of confidence or motivation, as noted by Khan and Rehman, who identified similar trends in Pakistani healthcare settings (16).

Education and experience emerged as significant predictors of knowledge and attitudes. Nurses with advanced qualifications, such as Post RN or BSN, and more than five years of experience demonstrated higher competency levels. These findings align with global evidence, such as a study by Zafar et al., which highlighted that specialized education significantly enhances nursing competencies in cardiac care (17). Locally, Ahmed and Khan also emphasized the role of continuous professional development in bridging competency gaps among nurses in Pakistan (18).

The gaps identified in this study, particularly in infection prevention measures and adherence to patient positioning protocols, underscore systemic issues such as insufficient staffing, lack of training, and high workloads. Globally, evidence supports the implementation of structured training programs and competency-based assessments to improve nursing practices. For example, Gupta et al. reported a 30% improvement in knowledge and practices following the introduction of simulation-based learning in cardiac units (19).

**Conclusion**

In conclusion, this study highlights the urgent need for targeted interventions to enhance nursing knowledge and practices in heart failure management. Addressing systemic barriers, implementing regular training programs, and fostering a culture of adherence to evidence-based practices are essential to improving patient outcomes and ensuring the quality of care in tertiary care hospitals.

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**Declarations****Data Availability statement**

All data generated or analyzed during the study are included in the manuscript.

**Ethics approval and consent to participate**

Approved by the department Concerned. (IRBEC-SNU-023411/23)

**Consent for publication**

Approved

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The authors declared absence of conflict of interest.

**Author Contribution****SHAHZAIB AHMAD (BSN (Generic) Student)**

Coordination of collaborative efforts.

Study Design, Review of Literature.

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Conception of Study, Development of Research Methodology Design, Study Design, Review of manuscript, final approval of manuscript.

Conception of Study, Final approval of manuscript.

**SYEDA SIDRA TASNEEM**

Manuscript revisions, critical input.

Coordination of collaborative efforts.

Data acquisition, analysis.

Manuscript drafting.

Data entry and Data analysis, drafting article.

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