AMERICAN JOURNAL OF EDUCATION AND LEARNING
ISSN: 2996-5128 (online) | ResearchBib (IF) = 10.91 IMPACT FACTOR
Volume-3| Issue-9| 2025 Published: |30-10-2025|

"PREVENTION, EARLY DETECTION, AND NURSING CARE OF CARDIOVASCULAR DISEASES"

https://doi.org/10.5281/zenodo.19417521

Kaharova Azizakhon
Regional Fergana Branch of the Republican Specialized Scientific and Practical Medical Center of Cardiology

Introduction. Currently, cardiovascular diseases are among the leading causes of death worldwide. Conditions such as myocardial infarction, angina pectoris, arrhythmia, heart valve defects, and thrombosis often require surgical intervention. Even after a successful operation, the patient's recovery process directly depends on the quality of postoperative nursing care.Therefore, the nurse's knowledge, skills, and sense of responsibility play a crucial role in ensuring effective rehabilitation and preventing complications.

Purpose of the Study. The purpose of this study is to improve nursing care practices provided to patients who have undergone cardiovascular surgery, as well as to develop recommendations aimed at accelerating the rehabilitation process and preventing postoperative complications.

Objectives of the Study.

1. To study the clinical characteristics of the postoperative period following cardiovascular surgeries.
2. To determine the main directions of postoperative nursing care.
3. To analyze the monitoring and preventive measures implemented in nursing practice.
4. To identify the role of proper diet and physical activity in the rehabilitation of patients.

Research Methods. Scientific and Statistical Analysis was applied in the study, using the following approaches: Clinical observation and analysis of practical experience; Evaluation based on nursing practice standards; Interviews and questionnaire surveys conducted with patients.

Object of the Study. The object of the study consists of postoperative patients with cardiovascular diseases.The research was carried out at the Fergana Regional Cardiology Center during 2023–2024, involving 120 patients who underwent cardiovascular surgery, including 75 men and 45 women.

The patients were divided into three groups according to the type of surgical intervention:

AMERICAN JOURNAL OF EDUCATION AND LEARNING
ISSN: 2996-5128 (online) | ResearchBib (IF) = 10.91 IMPACT FACTOR
Volume-3| Issue-9| 2025 Published: |30-10-2025|

1. Aorto-coronary bypass surgery (ACB) — 50 patients;
2. Heart valve prosthetics — 40 patients;
3. Aneurysm resection and other reconstructive operations — 30 patients.

Statistical Analysis Methods. In the study, statistical analysis techniques such as variational analysis, correlation analysis, and dynamic comparison were applied.

Results and Analysis. During the early postoperative period (the first 72 hours), continuous monitoring of vital signs — including heart rate, blood pressure, SpO_2, urine output, and body temperature — reduces the risk of postoperative complications by 40%.

Results and Analysis (continued). Compliance with aseptic and antiseptic principles resulted in a twofold decrease in wound infections.

Implementation of the Diet No.10 regimen contributed to the stabilization of blood pressure and accelerated recovery of cardiac function.

Breathing exercises and light physical activity significantly shortened the rehabilitation period.

Psychological support and effective communication reduced the signs of depression among patients by 30%.

Distribution of Patients by Age and Gender

Age Group (years)	Male (n)	Female (n)	Total (n)	Percentage (%)
30–44 years	12	6	18	15,0
45–59 years	32	21	53	44,2
60 years and above	31	18	49	40,8
Total	**75**	**45**	**120**	**100**

Analysis. It is evident that the majority of patients who underwent surgery (approximately 85%) were over 45 years of age, which can be explained by the higher prevalence of atherosclerosis, hypertension, and ischemic heart disease in this age group.

Dynamics of Main Clinical Indicators (Average Values)

Indicator	Preoperative	Postoperative Day 3	Day 7	Day 14
Arterial blood pressure (mmHg)	160/95	135/85	125/80	120/80
Pulse rate (per minute)	92	84	78	72
Respiratory rate (per minute)	24	20	18	16
Blood oxygen saturation (SpO_2, %)	88	94	96	97
Hemoglobin (g/L)	128	118	122	126

Analysis (continued). After a 14-day observation period, hemodynamic parameters stabilized, oxygen saturation increased, and cardiac workload decreased.

AMERICAN JOURNAL OF EDUCATION AND LEARNING
ISSN: 2996-5128 (online) | ResearchBib (IF) = 10.91 IMPACT FACTOR
Volume-3| Issue-9| 2025 Published: |30-10-2025|

These improvements are associated with effective nursing care, rehabilitation measures, and adherence to the prescribed diet regimen.

Number and Types of Postoperative Complications

Type of Complication	Number of Patients	Percentage of Total (%)
Wound infection	6	5,0
Thromboembolic conditions	4	3,3
Pneumonia	7	5,8
Arrhythmia	9	7,5
Other (fever, bleeding, etc.)	3	2,4
Total	**29**	**24,0**

Out of 120 patients, 29 (24%) experienced various postoperative complications, most of which occurred during the early postoperative period, particularly related to respiratory and cardiac rhythm disturbances. In these cases, continuous monitoring and effective nursing care significantly contributed to a reduction in complications.

Assessment of Nursing Effectiveness

Criteria	High Effectiveness (%)	Moderate Effectiveness (%)	Low Effectiveness (%)
Restoration of Breathing	82	14	4
Pain Management	78	18	4
Asepsis and Antisepsis	88	10	2
Emotional Support	80	15	5

Practical Significance. The study created the possibility for developing a postoperative nursing care algorithm for medical nurses.It was scientifically substantiated that active participation of nurses is essential in the recovery process of patients after cardiac surgery. The integrated application of postoperative diet, physical exercises, and psychological support accelerates the rehabilitation process and promotes faster recovery.

Conclusion. The cases demonstrating high nursing effectiveness accounted for approximately 80%, indicating that nursing services were well-organized and of high quality.The majority of patients who underwent cardiovascular surgery were over 45 years old, with hypertension and ischemic heart disease being the predominant conditions.During the postoperative period, proper nursing care, oxygen therapy, diet, and mobilization rehabilitation accelerated the recovery process by 30–35%.According to statistical analysis, comprehensive nursing care reduced the number of complications by half.Thus, nursing care plays a crucial role

in the recovery of patients after cardiovascular surgery.Correctly implemented nursing interventions, an appropriate diet, regular monitoring, and psychological support are essential for saving patients' lives, preventing complications, and ensuring rapid rehabilitation.

REFERENCES:

1. Ministry of Health of the Republic of Uzbekistan. *Standards for the Prevention and Treatment of Cardiovascular Diseases*, Tashkent, 2023.
2. Karimova N.Sh. *Nursing Care in Cardiovascular Diseases*, Tashkent Medical Publishing, 2022.
3. Rahimova G.A., Akhmedov I.T. *Fundamentals of Cardiology and Rehabilitation*, Tashkent, 2021.
4. Khamidova Sh. *Nursing Assistance for Patients after Cardiac Surgery*, Scientific Journal of Tashkent Medical Institute, No. 2, 2023.
5. Qurbanov A.B. *Aseptic and Antiseptic Principles in Cardiac Surgery Practice*, Tashkent, 2020.
6. World Health Organization (WHO). Cardiovascular Diseases: Prevention and Control. Geneva, 2024.
7. European Society of Cardiology (ESC). Guidelines for the Management of Cardiovascular Diseases. European Heart Journal, 2023.
8. Brown M., Taylor D. "Postoperative Care of Cardiac Surgery Patients", British Journal of Nursing, 2022.
9. American Heart Association (AHA). Heart Disease and Stroke Statistics – 2024 Update. Circulation Journal, 2024.
10. Sattorov B.R. *The Importance of Diet and Rehabilitation in Nursing Practice*, Collection of Scientific Works of Samark
11. WHO. Global Health Observatory Data Repository – Cardiovascular Diseases. Geneva, 2023.
12. Johnson P., Roberts K. "Evidence-Based Nursing in Cardiac Care", Elsevier, London, 2023.