

Assessing the Knowledge and Practices of Nurses in Postoperative Care Following Aortic Valve Replacement: A Cross-Sectional Study at a Tertiary Heart Centre in Sudan

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ABSTRACT

This study aimed to evaluate the knowledge and practices of ICU nurses in postoperative care following aortic valve replacement (AVR) and to examine correlations between demographic factors, knowledge levels, and practice performance at Madani Heart Centre, Sudan. A descriptive cross-sectional study conducted in a hospital setting to evaluate ICU nurses' knowledge and practice and identify factors influencing performance. The study took place at Madani Heart Centre, a tertiary cardiac care facility in Sudan, which provides specialized cardiac surgery and postoperative intensive care services for patients undergoing complex procedures such as AVR. Forty ICU nurses participated. Data were collected using a validated self-administered questionnaire for knowledge assessment and an observation checklist for practice evaluation. Demographic data included age, gender, education, work experience, and previous cardiac training. Statistical analysis was performed using SPSS 16.0, employing descriptive and inferential statistics to examine relationships and correlations. Most participants were female (80%) and held a bachelor's degree (70%). Overall knowledge and practice levels were moderate (70% and 72.5%, respectively). Higher education, longer work experience, and previous cardiac training were significantly associated with improved scores ($p < 0.05$). A positive correlation between knowledge and practice was observed ($r = 0.63$, $p = 0.001$). The study highlights the need for structured in-service education and continuous professional development to strengthen ICU nurses' competencies in postoperative cardiac care, enhancing patient outcomes in tertiary care settings.

Keywords: Aortic valve replacement, postoperative care, intensive care nursing, nurses' knowledge, clinical practice, Sudan

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