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Safety-promoting nursing interventions in robotic surgery: a systematic literature review

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Introduction
Robotic surgery poses a challenge by bringing technological innovation to the operating room, which requires an adaptation of traditional nursing care to cope with new complex procedures, ensuring interventions that promote recovery and safety in the perioperative period.

Objective
To identify safety-promoting nursing interventions associated with robotic surgery.

Methods
Systematic literature review, based on the Joanna Briggs Institute (JBI) methodology, using electronic databases: CINAHL, Medline, Scopus and LILACS. The inclusion criteria were English, Portuguese and Spanish and articles published between January 2014 and May 2024. The methodological quality of the articles was assessed according to the Critical Appraisal Tools proposed by JBI, in which those with more than 75% compliance with the criteria were included.

Results
A total of 543 studies were selected, of which only 16 articles met the eligibility criteria. With different designs, observational (*n*=1), qualitative (*n*=4), literature reviews (*n*=4), mixed (*n*=4), delphi (*n*=1), prospective pilot (*n*=1) and descriptive quantitative (*n*=1). The interventions identified were divided into the three phases of the perioperative period. Pre-operative: health education, aimed at surgical specificities, fears and doubts of the person/family; systematized assessment of health history and current condition; implementation of the operative checklist. Intra-operative: prevention of injuries associated with surgical positioning; assessment of continuous hemodynamic status; safe environment; infection control; pre-testing and maintenance of robotic equipment. Post-operative: control of symptoms and adverse events; early initiation of mobility and training for self-care. As facilitating factors, specialized training and the quality of communication.

Conclusion
Nursing intervention to promote safety in robotic surgery requires specific knowledge of the person, centered care that goes beyond the technical aspects of positioning and configuring the robot. Randomized controlled studies are suggested to evaluate the effectiveness of nursing care in perioperative safety in the integration of new technologies.

Keywords
Nursing care; Perioperative nursing; Robotic surgery; Safety; Sistematic review.

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