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# PATIENT SAFETY

## Perioperative nursing perspectives

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### Akademisk avhandling

som med vederbörligt tillstånd av Rektor vid Umeå universitet för avläggande av medicine doktorexamen framläggs till offentligt försvar i Aula Biologica, Biologihuset, fredagen den 18 oktober, kl. 09:00.

Avhandlingen kommer att försvaras på svenska.

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## Abstract

**Background:** Operating rooms (ORs) are high-risk environments for patients and complex workplaces for staff. To enhance the safety climate, prevailing attitudes towards patient safety in ORs needs to be understood. Experiences of operating room nurses (ORNs) regarding patient safety are little researched yet crucial in improving safety. In Sweden, there is little agreement on key perioperative patient safety indicators, hindering the ability to monitor and improve nursing practices. Implementing policies and guidelines includes ensuring adherence through compliance assessment and is key to infection prevention. Currently, data on such compliance is lacking

**Aim:** The overall aim of this PhD project is to explore perioperative nursing perspectives on patient safety in perioperative care.

**Methods:** In Study I, data was collected using the Safety Attitudes Questionnaire: OR version (SAQ-OR), which was distributed to ORNs in Sweden via an online survey platform. Descriptive and comparative statistics were employed, along with a thematic analysis. Study II involved interviews with ORNs, which were analysed through qualitative content analysis. In Study III, data was collected in a three-round modified Delphi study among an expert group of ORNs using an online survey platform. Descriptive statistics were employed for analysis. Study IV involved observations and group interviews with OR teams. The observational data was analysed using descriptive statistics, while the interview data underwent qualitative content analysis.

**Results:** In Study I, older and more experienced ORNs rated the safety climate more positively compared with their younger and less experienced counterparts, as did county hospital employees compared with those at university hospitals. Better communication and adequate task time are needed to improve patient safety. In Study II, ORNs proactively addressed emerging problems during joint replacement surgery, emphasising individual responsibility for patient safety. In Study III, consensus was achieved on 73 perioperative patient safety indicators, with 74% process indicators and 26% structure indicators. Having specific structures in organisations and following defined processes were important for patient safety. In Study IV, infection-control strategies were implemented in ORs, but consistent compliance to these strategies remained a challenge. Factors like organisational layout, staff awareness, enhancement of procedures and teamwork were considered to play important roles in how implementation turned out.

**Conclusion:** ORs need a strong safety culture. Small hospitals often work as close-knit teams, an approach larger hospital could benefit from. Retaining staff becomes crucial in ensuring safety, as experienced ORNs are needed to support their less-experienced colleagues. Effective communication and collaboration remain important for promoting a positive safety climate. ORNs continuously adapt their work to address problems that arise, this highlights the need for systemic routine reviews. Consensus was reached on perioperative safety indicators, including specific structural and process measures to ensure patient safety. Establishing Prosthetic-Related Infections Should Stop (PRISS) recommendations as the standard practice remains challenging, underscoring the importance of effective communication, comprehensive education and universal adherence to safety protocols.

## Keywords

care bundle, operating room nurses, patient safety, perioperative safety indicators, resilience, safety climate

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