Nurses' knowledge and experience of preoperative cognitive assessment for the older elective surgical patient

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Abstract

Background

The global population of individuals aged 60 years or older is projected to double by 2050. Coupled with advances in medicine and surgery, means the number of older patients undergoing surgical procedures is increasing. It is well established advancing age and pre-existing cognitive impairment are significant risk factors associated with the development of perioperative neurocognitive disorders (PND). Postoperative delirium is the leading complication of major surgery in older persons. It is associated with increased rates of mortality, functional decline including progression to dementia, longer lengths of hospital stay and institutional discharge.

Preoperative evaluation of cognitive function is often overlooked for older patients undergoing elective surgery, meaning undiagnosed pre-existing mild cognitive impairment may not be recognised and targeted interventions, to reduce risk of PND and optimise surgical outcomes, are not initiated. Despite this being feasible, preoperative cognitive assessment is rarely routinely undertaken for older persons scheduled for elective surgery.

Whilst nurses working in preoperative environments are ideally placed to aid detection of pre-existing cognitive impairment due to having frequent contact with patients preparing for surgery, research suggests nurses lack knowledge of structured cognitive assessment and do not typically receive formal training about how to assess patients.

Currently, there is no published research reporting on nurses' knowledge and experience of cognitive assessment in New Zealand (NZ). The following research study is proposed to address the gap in the evidence by surveying nurses working in preoperative areas in private healthcare facilities in NZ, where over 67% of all the country's elective surgeries are performed.

Methods

The research design will be a quantitative, descriptive, cross-sectional self-administered survey, via the online survey platform Qualtrics. Participants will be nurses working in a preoperative environment in a NZ private healthcare facility.

Recruitment will be via an advertising flyer, which will include brief details of the study along with a hyperlink and QR code to direct participants to an information sheet and the questionnaire. Flyer distribution will be via email to 48 separate private healthcare facilities in

NZ and via the Perioperative Nurses College (PNC) to its membership database. The link to access the online questionnaire will remain open until 31st May 2024.

The questionnaire will be anonymous. Formal consent will not be sought. Completion and submission of the questionnaire will be assumed as the participant's consent to participate. Participants will be offered the opportunity to go into a draw to win a $50 Prezzy card, and to request a copy of the study results. Personal information collected for these purposes will not be linked to the participants questionnaire responses.

Data will be held on a secure server at the University of Auckland. Access to the data will by the research team only, using university credentialed two-factor authentication.

Ethics committee approval for this study has been granted by the Auckland Health Research Ethics Committee (Reference AH26645).

Data Analysis

Descriptive statistics will be used for data analysis, with statistical testing to assess distribution, including frequency distributions, central tendency and/or variability. We will use inferential statistical testing to find relationships between variables, e.g., linear regression testing to look at cause-and-effect relationships, and comparison testing such as T-tests to look for differences among group means. Data analysis will be guided by a university biostatistician and SPSS software will be used unless otherwise advised by the biostatistician.

Dissemination of Research

The anonymous data will be shared publicly. It is intended this will include, but not be limited to, the student researcher's Masters thesis; publication in an academic perioperative and/or gerontological nursing journal; and presented at the PNC national conference in October 2024, in Wellington.