NATPGE: Understanding Registered Nurses' Attitudes Towards Post Graduate Education

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ABSTRACT

Nursing education is a dynamic process designed to enable nurses to competently meet the healthcare needs of society. Health system restructuring has been associated with diminishing postgraduate specialist nursing numbers worldwide. Valid instruments that monitor and evaluate nurses' attitudes to gauge educational barriers and facilitators are a central component in planning effective education, and have been unavailable.

Overall both the CE and the RNs ranked the NATPGE, using the CVI, as a realistic training platform that would be useful for evaluating RNs' attitudes towards postgraduate education. The comments received from the CE resulted in some minor changes to the wording of some items for better clarity and simplicity. No particular concerns were raised about any of the items by the CE. The CE was agreeable that the items were arranged in a positively and negatively worded sequence, which was intentional as to prevent response bias.

The present research indicates very good content and face validity and whilst the test-retest reliability overall was moderate, several individual questions did have poor kappa values.

Keywords: Registered Nurses, Postgraduate education, Psychometric scales

I. INTRODUCTION

Health Workforce Australia (2012) [1] has predicted a shortfall of 109,000 nurses Australia-wide by 2025. One of the recommendations to avoid a potential crisis in workforce supply is to increase retention of nurses through education [1]. While there is little literature from Australia, international studies to date in the area of postgraduate education and specialty nursing focus on critical care, emergency, and paediatric nursing specifically in the area of staff retention [2-3]. Studies have shown that nurses who have completed postgraduate education tend to stay longer in nursing [4-8]. To understand the attributes and needs of our nursing workforce, an instrument that monitor and evaluate nurses' attitudes to gauge educational barriers and facilitators are a central component in planning effective education.

II. OBJECTIVE

To describe the development and design of an instrument to measure the Registered Nurses Attitudes Towards Post Graduate Education (NATPGE) in a representative sample of registered nurses in Australia.

III. ETHICAL CONSIDERATION

The NATPGE pilot study was approved by The University of Queensland Behavioural and Social Sciences Ethical Committee (2011000884). The NMeS was also approved by the Behavioural and Social Sciences Ethical Review Committee of The University of Queensland (2005000696) and in addition, the New Zealand component was reviewed and approved by the Massey University Human Ethics Committee.

IV. METHOODS

Items on the NATPGE were drawn from the literature review which was used to inform the content and the structure of the NATPGE questionnaire. From the literature review, it can be concluded that there are a multitude of issues associated with registered nurses' attitudes to postgraduate education for specialty practice, in particular their own experiences but also the attitudes of others. The literature provides some insight into the facilitators and challenges faced by registered nurses in undertaking postgraduate education as well as the

benefits they perceive as accruing from such study. Given the paucity of research in nurses' attitudes towards postgraduate education, and the effects of postgraduate education on increasing knowledge, skills and change in practice, further work is needed to develop a knowledge base about registered nurses' attitudes towards postgraduate education for specialty nursing practice, the facilitators and challenges they encounter in accessing it, and its effect on retention in nursing.

A quantitative method was chose for this research because the development and piloting of the questionnaire that is the subject of this study, the first phase of a larger research plan, would enable baseline data to be collected on the effect of postgraduate education on a range of attitudes, knowledge and behaviour. A number of processes have been undertaken to ensure the validity and reliability of the NATPGE questionnaire.

1. **Content validity**- Content validity is a crucial factor in instrument development that addresses item rigour- that is, whether an item adequately measures a desired domain of content [9]. For this study, four panel members were selected for the different expertise each could bring to the critique of the items. The four expert domains were: expertise in the clinical area, expertise in the development of psychometric scales and expertise in the development and analysis of an instrument. Members of the Expert Panel were given instructions, the NATPGE questionnaire and a rating form. They were asked to assess the items for clarity, logic of fit, and domain coverage and agree on the final version of the NATPGE survey-instrument prior to testing its face validity.

2. **Face validity**- Face validity, sometimes referred to as representative validity, is the degree of accuracy with which a measurement instrument represents what it is trying to measure [10]. A convenience sample of 25 Registered Nurses (RNs) was selected from four major Queensland tertiary hospitals to assess the instrument content readability and relevance. This group of RNs was asked to assess issues such as phrasing and unclear terms and recommend other important or salient terms.

3. **Reliability**- Reliability is the consistency of a set of measurements or of a measuring instrument [11]. The Nurses and Midwives e-Cohort Study (NMeS) is a longitudinal web-based study of 7,604 nurses and midwives in three countries: Australia, New Zealand and the United Kingdom. The sample for this study was drawn from the NMeS, which was established with an aim to create a longitudinal e-Cohort for follow-up studies [12]. The NMeS has also been chosen as it has been found to be representatives of the registered nurses' population in Australia [13] with participants in all States and Territories of the country and who have consented to be contacted for other research. A random sample of 100 RNs from the Nurses and Midwives e-Cohort Study (NMeS) [14] were invited to participate in a test-retest pilot as part of the process of assessing the reliability of the online NATPGE. To gauge the test-retest reliability, the instrument was administered at two different time points, 3 weeks apart, under similar conditions.

V. RESULTS

Content and face validity

Overall both the Expert Panel members and the RNs ranked the NATPGE, using the CVI, as a realistic training platform that would be useful for evaluating RNs' attitudes towards postgraduate education. The comments received from the Expert Panel members resulted in some minor changes to the wording of some items for better clarity and simplicity. No particular concerns were raised about any of the items by the Expert Panel members. The Expert Panel members were agreeable that the items were arranged in a positively and negatively worded sequence, which was intentional as to prevent response bias.

Reliability: Pilot Test

Complete data were available and was analysed for 36 of the 100 (36%) sample of RNs who completed the test-retest reliability of the NATPGE instrument. The confidence interval will indicate a range of plausible values for the "true" value of kappa, with a stated level of confidence and in this study, 95% is used. In the pilot testing of the NATPGE, the level of agreement for each participant was within 95% confidence estimates, indicating that the instrument was stable over time. There were 46 (46%) respondents in the first test and 36 (78.3%) participated in the second teat (retest). There was no missing data, with all participants answering all 14 items. The lack of missing data further indicates the acceptability of items in instrument by the sample.[15]. Overall the results display an 80% fair to moderate kappa (k_w = 0.29-0.57) agreement; however, there is some variability (k_w = 0.0 to 0.79) between the test and retest kw for each individual question (Graph 1).
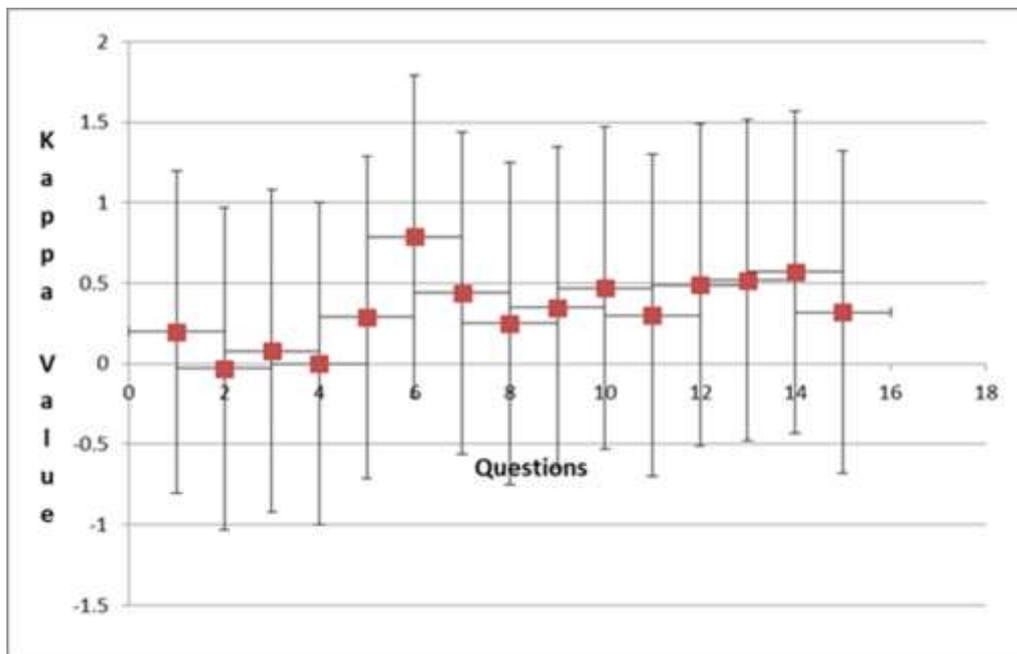
Graph 1: Kappa Agreement and SE (test and retest of 36 Registered Nurses) for the 15 NATPGE instrument questions

VI. CONCLUSION

Demographic data indicated that the sample consisted of 66.8% (n=24) registered nurses with more than 15 years' experience in nursing and 69.3% (n=25) between the ages of 41 years to 60 years old. There are no plausible hypotheses that a group consisting of a majority of middle age registered nurses should be more inconsistent in their attitudes than any other group. Other potential explanations for this variation include changes in the context or constructs being measured; an inadequate or excess interval in the test-retest timeframe; and an inadequate sample. As far as it can be determined, there were no significant changes in context and it was assumed that there were no substantial changes in the construct being measured in the test-retest reliability pilot. However, this study encountered some of these as follows: the site crashed on the day the survey was open and some participants were not able to access the survey on the retest despite completing the survey in the initial test attempt.

In summary, temporal stability i.e. the fair to moderate Kappa (Kw) values demonstrated the level of agreement between individual responses over time albeit a small sample size. The temporal stability validated and assessed the reliability of the NATPGE and helped to fine-tune the research design, sampling methodology and data collection method [16] for the next phase of the study.

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