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**Institutionen för neurobiologi, vårdvetenskap och samhälle**

# Registered nurses' research use - a national survey on extent, patterns, intentions and associated factors in undergraduate education and the first years of clinical practice

**AKADEMISK AVHANDLING**

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## ABSTRACT

The gap between research and practice is well-known and has been addressed globally. The application of research-based knowledge in clinical practice has the potential to improve care quality and patient safety. Knowledge and abilities for critical reflection and implementation of new knowledge into practice are among the educational goals for today's nursing education. Knowledge about newly graduated nurses' extent of research use (RU) in clinical practice, as well as factors associated with nurses' RU the first years postgraduation is scarce, however. The **overall aim** of this thesis was to study registered nurses' self-reported instrumental, conceptual and persuasive RU (IRU, CRU and PRU) the first 3 years postgraduation, change in RU over time and associated factors. A further aim was to study nursing students' intentions to use research in future practice and whether intention and educational factors could predict subsequent RU behavior. **Methods:** Data derived from the national LANE (Longitudinal Analysis of Nursing Education) survey study and its three cohorts of nursing students (subsequently registered nurses), graduating in 2002, 2004 and 2006 (the EX2002, EX2004 and EX2006 cohorts). Data were analyzed using quantitative methods. **Results:** In **Study I**, the nurses' RU extent was studied at year 1 and 3 (Y1 and Y3) postgraduation in the EX2004 (Y1) and EX2002 (Y3) cohorts. IRU was reported as most prevalent, occurring on about half of the working shifts, followed by CRU and PRU. Using cluster analysis, seven clusters of nurses were identified at both Y1 and Y3, where each cluster represented a specific RU profile. Cluster profiles with low or very low RU across all three RU kinds predominated (45.5% at Y1, 51.6% at Y3). In **Study II**, the extent of RU was studied at Y2 (EX2004). Furthermore, changes in RU between Y1 and Y2 were studied in relation to changes in working conditions. No significant differences in mean values were found between the time points. The seven cluster profiles were also identified at Y2, with most individuals tending to present the same profile over time. In addition, low users at Y1 tended to become even lower users at Y2 where overall low users constituted 54.9% of the cluster sample. Change towards overall low RU was not associated with changes in working conditions. In **Study III**, individual, work contextual and educational determinants of overall low RU were investigated at Y2 (EX2004). Through multivariate logistic regression modeling, six determinants were identified: work in the psychiatric setting, role ambiguity, sufficient staffing, low work challenge, being male and low student activity. In **Study IV**, nursing students' IRU intentions were studied as a predictor and mediating variable for their IRU behavior at Y1 (EX2006). Intended IRU on more than half or almost every working shift was reported by 34% of the sample. A statistical full mediation model was set-up and tested, showing a direct effect from intention on subsequent behavior. Furthermore, intention acted as a mediating variable for the effects from capability beliefs and perceived support for RU during undergraduate studies. **Conclusions:** The extent of RU was rated relatively low, which is worrying considering today's demand for research-based nursing practice. Multiple factors were associated with the nurses' extent of RU the first years postgraduation, individual as well as educational and work contextual. Undergraduate education, both campus and clinical education, needs a clear focus on how to promote high RU intentions while the healthcare organization needs to provide the right conditions for supporting RU among nursing students and newly graduated nurses. The cluster analysis brought a new perspective into this field of research by illustrating a multidimensional and nuanced picture of RU.

**Key words:** cluster analysis, evidence-based practice, intention, logistic regression, mediation analysis, nursing students, registered nurses, research use, questionnaire.