

Så hva lærer de?

Resultater fra doktorgradsarbeid om masterstudenter i AKS

Ingrid Taylor

Førsteamanuensis

Institutt for sykepleie- og helsevitenskap





Doktoravhandlingens mål

Undersøke om avansert klinisk allmennsykepleie-studenter utviklet klinisk kompetanse i tråd med den internasjonale standarden for *nurse practitioner*

Tidligere forskning

Results: 24 RCTs (28,974 participants) and 2 economic studies met the inclusion criteria. Pooled analyses showed higher overall scores of patient satisfaction with nurse-led care (SMD 0.18, 95% CI 0.13 to 0.23). In RCTs of single contact or urgent care, short-term (less than 6 months) follow-up episodes and in small trials (N < 200). Nurse-led care was effective at reducing the overall risk of hospital admission (RR 0.76, 95% CI 0.64 to 0.91), mortality (RR 0.89, 95% CI 0.84 to 0.96), in RCTs of ongoing or non-urgent care, longer (at least 12 months) follow-up episodes and in larger (N > 200) RCTs. Higher quality RCTs (with better allocation concealment and less attrition) showed higher rates of hospital admissions and mortality with nurse-led care albeit less or not significant. The results seemed more consistent across nurse practitioners than with registered or licensed nurses. The effects of nurse-led care on QoL and costs were difficult to interpret due to heterogeneous outcome reporting, valuation of resources and the small number of studies.

Conclusions: The available evidence continues to be limited by the quality of the research considered. Nurse-led care seems to have a positive effect on patient satisfaction, hospital admission and mortality. This important finding should be confirmed and the determinants of this effect should be assessed in further, larger and more methodologically rigorous research.

Keywords: Systematic review, Meta-analysis, Physician-nurse substitution, Skill-mix, Health outcomes, Cost

Background: Concerns about the global shortage of health care providers [1,2] continue to fuel the debate about the need to introduce new strategies of health care delivery. Especially, the increasing shortage of physicians makes substitution by nurses a common demand which is expected to escalate with ageing populations and an increasing prevalence of chronic conditions. Two systematic reviews published ten years ago suggested that care provided by nurses might be equally good as the care provided by physicians [3,4]. Health outcomes, use of resources and healthcare costs were found to be similar between nurses and physicians while patient satisfaction was similar or better with nurse-led care. These differences, however, were limited by the low volume and quality of the studies. In this context, it is also important to consider that nurses' education continues to evolve resulting in different roles and qualifications across different health care systems. It seems

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International practice settings, interventions and outcomes of nurse practitioners in geriatric care: A scoping review

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ARTICLE INFO

Keywords: Advanced practice nursing, Geriatrics, Practice settings, Difference of education, Geriatric assessment, Long-term care, Nurse practitioners, Primary care, Transition care

Abstract: Objectives: To identify and summarize the current clinical settings, interventions, and outcomes of nurse practitioner care specific to older people. Design: Scoping review of all literature published and grey literature. Data source: A structured literature search was conducted of CINAHL, EMBASE, MEDLINE, Google Scholar, and Cochrane Collaboration and Joanne Briggs Institute databases. Review methods: Following the Arksey and O'Malley framework, predefined criteria and quantitative operational methods of Mays presented more practitioners provided care for nurses over 65 years were included. Studies were reviewed independently by two investigators. Data were collected, collated by setting, summarized in tables and synthesized for analysis. Results: In total, 56 primary research studies from four continents and 21 systematic reviews were identified. Primary studies were conducted in primary care (n = 13), home care (n = 14), long-term care (n = 19), acute hospital care (n = 9), and transitional care (n = 10). Three practitioner interventions included additive as well as replacement. NP risk reduction to meet specific senior citizens care needs. Studies reported mean overall patient satisfaction (n = 43), cost (n = 26), quality of life (n = 44), health-related quality of life (n = 14) and quality of life (n = 7). Conclusively, nurse practitioners administered education to 16.1% (28%) of overall population or 21.6% (28%) of the study population. Financial-related outcomes via service utilization (n = 41) and benefits were frequently reported in home care (54.3%), and long-term care (56.7%). Impact: Among patients and care-related outcomes, health-related outcomes were most frequently reported (n = 44). Primary care was most frequently reported (included 11/21 RCTs (52%)). Translational care improved patient health outcomes, except for senior citizens. Conclusion: This review demonstrates improved or not-inferiority results of nurse practitioner care to older people across settings. More well-designed, rigorous studies are needed particularly in relation to costs. The results of this review could be used to inform future practice review of effectiveness of NP care specific to older people. Despite the demonstrated NP role, barriers to implementing the same practitioner roles across internationally and more work is needed to develop and promote their roles.

AKS og pasientresultater

Cochrane Library Trained reviewers, informed decisions, better health. Cochrane Database of Systematic Reviews

Substitution of doctors by nurses in primary care

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What is already known about the topic?

- The nurse practitioner role continues to spread and develop internationally.
- Studies have demonstrated positive outcomes in patients receiving care from nurse practitioners compared to generalists or better outcomes compared to physician care albeit/and care across the five identified settings.
- What this paper adds

- This review identified the studies that reported the impact of NP care in geriatric patients.
- NP care of geriatric patients was identified in five clinical settings, including primary care, home care, long-term care, acute care, and transitional care.
- NPs have consistently produced equivalent or better outcomes compared to physician care albeit/and care across the five identified settings.
- It highlights the outcomes sensitive to NP care in geriatric patients.

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• Positive behandlingsresultater

• Økt pasienttilfredshet

• Færre konsultasjoner

Background: Demand for primary care services has increased in developed countries due to population ageing, rising patient expectations, and reforms that shift care from hospitals to the community. At the same time, the supply of physicians is constrained and there is increasing pressure to contain costs. Shifting care from physicians to nurses is one possible response to these challenges. The expectation that nurse-doctor substitution will reduce costs and physician workload while maintaining quality of care.

Objectives: Our aim was to evaluate the impact of doctor-nurse substitution in primary care on patient outcomes, process of care, and resource utilization including cost. Patient outcomes included: mortality, morbidity, satisfaction, compliance, and preference. Process of care outcomes included: practitioner adherence to clinical guidelines, standards or quality of care; and practitioner health care activity (e.g. provision of advice). Resource utilization was assessed by: frequency and length of consultations; return visits; prescriptions; tests and investigations; referral to other services; and direct or indirect costs.

Search methods: The following databases were searched for the period 1960 to 2002: Medline, CINAHL, Eids, Embase, Social Science Citation Index, British Nursing Index, BMC, EPOC Register, and Cochrane Controlled Trial Register. Searches were specified for the setting (primary care), professional (nurse), study design (randomized controlled trial, controlled before-and-after study, interrupted time series), and subject (e.g. skill mix). The reviews is currently being updated and the updated version should be published before the end of 2014.

Selection criteria: Studies were included if nurses were compared to doctors providing a family primary health care service (excluding accident and emergency services). Primary care doctors included: general practitioners, family physicians, paediatricians, general internists or geriatricians. Primary care nurses included: practice nurses, nurse practitioners, clinical nurse specialists, or advanced practice nurses.

Data collection and analysis: Study selection and data extraction was conducted independently by two reviewers with differences resolved through discussion. Meta-analysis was applied to outcomes for which there was adequate reporting of intervention effects from at least three randomised controlled trials. Semi-quantitative methods were used to synthesise other outcomes.

Substitution of doctors by nurses in primary care (Review)

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Research Article BMC Health Services Research **Open Access**

Substitution of physicians by nurses in primary care: a systematic review and meta-analysis

Nabera Anant Martinez-Gonzalez¹, Sima Duggal², Ryan Tandjung³, Flure Huber-Gotman⁴, Stefan Markun⁵, Michel Wensing¹ and Thomas Rosemann^{6*}

Abstract: **Background:** In many countries, substitution of physicians by nurses has become common due to the shortage of physicians and the need for high-quality, affordable care, especially for elderly and multi-morbid patients. We examined the evidence on the clinical effectiveness and care costs of physician-nurse substitution in primary care. **Methods:** We systematically searched CINAHL, Medline and Embase, the Cochrane Library and CINAHL up to August 2012, selected and critically appraised published randomised controlled trials (RCTs) that compared nurse-led care with care by primary care physicians on patient satisfaction, quality of life (QoL), hospital admission, mortality and costs of healthcare. We assessed the individual study risk of bias, calculated the study-specific and pooled relative risks (RR) or standardised mean differences (SMDs), and performed fixed-effects meta-analysis. **Results:** 24 RCTs (28,974 participants) and 2 economic studies met the inclusion criteria. Pooled analyses showed higher overall scores of patient satisfaction with nurse-led care (SMD 0.18, 95% CI 0.13 to 0.23). In RCTs of single contact or urgent care, short-term (less than 6 months) follow-up episodes and in small trials (N < 200). Nurse-led care was effective at reducing the overall risk of hospital admission (RR 0.76, 95% CI 0.64 to 0.91), mortality (RR 0.89, 95% CI 0.84 to 0.96), in RCTs of ongoing or non-urgent care, longer (at least 12 months) follow-up episodes and in larger (N > 200) RCTs. Higher quality RCTs (with better allocation concealment and less attrition) showed higher rates of hospital admissions and mortality with nurse-led care albeit less or not significant. The results seemed more consistent across nurse practitioners than with registered or licensed nurses. The effects of nurse-led care on QoL and costs were difficult to interpret due to heterogeneous outcome reporting, valuation of resources and the small number of studies. **Conclusions:** The available evidence continues to be limited by the quality of the research considered. Nurse-led care seems to have a positive effect on patient satisfaction, hospital admission and mortality. This important finding should be confirmed and the determinants of this effect should be assessed in further, larger and more methodologically rigorous research. **Keywords:** Systematic review, Meta-analysis, Physician-nurse substitution, Skill mix, Health outcomes, Cost

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Implementation of advanced practice nursing for minor orthopedic injuries in the emergency care context: A non-inferiority study

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Keywords: Non-inferiority study; Orthopedics

Abstract: Aim: To evaluate the implementation of advanced practice nursing for patients with minor orthopedic injuries, including comparison of outcomes in relation to advanced practice nurse versus standard design. A non-inferiority study was performed in an emergency department in Norway, where advanced design. Methods: Patients with minor orthopedic injuries were compared with standard design for advanced practice nursing. Results: Patient satisfaction, patient adherence to treatment, and patient adherence to treatment were similar between the two groups. Conclusion: Implementation of advanced practice nursing for minor orthopedic injuries was non-inferior to standard design. In the nursing model, registered nurses worked at an advanced level of qualifications at presentation. The nursing model, registered nurses worked at an advanced level of qualifications at presentation. In the nursing model, registered nurses worked at an advanced level of qualifications at presentation. The nursing model, registered nurses worked at an advanced level of qualifications at presentation.

International Journal of Quality in Health Care 2015, 37(5), 404–408

ISQua International Society for Quality in Health Care

Article Quality of primary care by advanced practice

2021; Swan et al., 2015; Yang et al., 2021;

MELANIE SWAN, SACHA FERUGSON, ALICE CHANG, ELAINE LARSON, and ARLENE SMALDONC*

Politisk enighet om AKS som tiltak

- Forskrift om nasjonal retningslinje for masterutdanning i avansert klinisk allmennsykepleie (2020)
- Forskrift om spesialistgodkjenning for sykepleiere (2020)
- Helsedirektoratet (2017; 2019; 2020; 2021)
- Meld. St. 26 (2014–2015) Fremtidens primærhelsetjeneste
- Meld. St. 15 (2017-2018) Leve hele livet
- NOU 2023: 4 Tid for handling



AKS skal være nasjonalt regulert



etter internasjonal standard



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ON ADVANCED
PRACTICE NURSING
2020**



Internasjonal standard

- Integrere sykepleiefaglige og medisinske ferdigheter
- Vurderer, diagnostiserer og behandler pasienter
- Primærhelsetjenesten og akuttmottak
- Akutte fysiske plager og kronisk sykdom

Nasjonal forankring i lovverket



Forskrift om nasjonal retningslinje for masterutdanning i avansert klinisk allmennsykepleie



Forskrift om spesialistgodkjenning for sykepleiere



Forskrift om nasjonal retningslinje for masterutdanning i avansert klinisk allmennsykepleie

Definerte kompetanseområder

- Klinisk vurderings-, beslutnings- og handlingskompetanse
- Helsekompetanse, pasientopplæring og veiledning
- Faglig ledelse og koordinering
- Kunnskapsbasert fagutvikling, tjenesteforbedring og innovasjon

Krav om kliniske studier

- Praksisstudiene skal utgjøre minimum 12 uker à 40 timer per uke.

Ingrid Taylor

**Advanced practice nursing students' development of
clinical competence – A Norwegian mixed-methods study**



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 ORIGINAL ARTICLE **Child Nursing** WILEY

The self-assessment of clinical competence and the need for further training: A cross-sectional survey of advanced practice nursing students

Ingrid Taylor MSc, RN, PhD student^{1,2} | Pia Ring-Jørgensen PhD, RN, Associate Professor, Vice Dean³ | Sigrid Wangensteen PhD, RN, Associate Professor⁴ | Elisabeth Finnbakk MSc, RN, PhD Student, Assistant Professor^{5,6} | Linn Sandvik PhD, Professor⁷ | Brorstein McCormack PhD, RN, Professor⁸ | Lisebeth Fagersten PhD, RN, Professor⁹

Abstract
 Aims and objectives: To describe and analyse advanced practice nursing students' self-assessment of their clinical competence and identify further training and RNs' support needs for the possible needs for variables in their self-assessment.
 Background: The self-assessment of clinical competence is an important tool for personal development, professional development and educational needs to improve patient care.
 Design: A cross-sectional survey following 118080 guidelines was used.
 Methods: Questionnaire studies. Data were cross-sectionally collected on 1000 participants in this study, and data were collected using a cross-sectional of the professional level self-assessment tool. Descriptive, correlation and regression analysis were performed.
 Results: The students gave the highest self-assessment rating for their self-assessment in taking full responsibility and for the need for further training in medication therapy and assessment. Although the students gave themselves low ratings for the use of electronic devices, they assessed their need for further training in this area as being high. Their work experience as registered nurses did not predict higher self-assessment scores nor significant predictors of clinical competence nor the need for further training.
 Conclusions: The findings indicate that self-assessment is appropriate for students in advanced practice nursing programmes. This study exposes their engagement in self-assessment and the need to facilitate students with the possibility of electronic devices. It highlights the early engagement that students that experience their need for advanced practice nursing programmes. These programmes need to be designed to meet the needs of the students.

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Nurse Education in Practice

Journal of Clinical Nursing

Original research

The Objective Structured Clinical Examination to evaluate nurse practitioner education: A study of students' and examiners' experiences

Ingrid Taylor^{1,2}, Pia Ring-Jørgensen³, Edda Johansen⁴, Håke Løy-Malmberg⁵, Lisebeth Fagersten⁶

Abstract
 Objective: The aim of this study was to explore the experiences of students and examiners in the Objective Structured Clinical Examination (OSCE) in nurse practitioner education. The study was conducted in a Norwegian university of applied sciences. The study included 100 students and 10 examiners. The study was conducted in a Norwegian university of applied sciences. The study included 100 students and 10 examiners. The study was conducted in a Norwegian university of applied sciences. The study included 100 students and 10 examiners.

1. Introduction
 Advanced Practice Nurses (APNs) have emerged as a key component of the healthcare workforce in many countries. They provide a range of services, including direct patient care, patient education, and care coordination. The role of APNs is expanding, and they are increasingly being integrated into primary care teams. The development of clinical competence is a key challenge for APNs, and it is essential to ensure that they are equipped with the skills and knowledge needed to provide high-quality care. The Objective Structured Clinical Examination (OSCE) is a widely used method for assessing clinical competence in healthcare professionals. It involves a series of standardized scenarios that test a candidate's ability to perform specific clinical tasks. The OSCE is a practical assessment that allows examiners to observe a candidate's performance in a simulated clinical setting. The OSCE is a practical assessment that allows examiners to observe a candidate's performance in a simulated clinical setting. The OSCE is a practical assessment that allows examiners to observe a candidate's performance in a simulated clinical setting.

Open Access Article in BMC Nursing
 Available online at: <https://onlinelibrary.wiley.com/doi/10.1111/jocn.16111>

BMC Nursing

RESEARCH **Open Access**

Development of clinical competence – a longitudinal survey of nurse practitioner students

Taylor¹, Ring-Jørgensen², Finnbakk³, Wangensteen⁴, Sandvik⁵, and Fagersten⁶

Abstract
 Background: In order to achieve a sustainable standard of advanced clinical competence for nurse practitioners, it is important to investigate the development of clinical competence among nurse practitioner students.
 Aim: The aim of the present study is to explore the development of clinical competence in advanced clinical competence from the beginning of their education to the completion of their clinical practice.
 Design: The study involved the completion of a longitudinal survey using a 118080 guideline.
 Methods: The participants consisted of 10 registered nurses from a nurse practitioner programme at a Norwegian university. The Professional level self-assessment tool was used for data collection during the period August 2019 to May 2020.
 Results: The students developed their clinical competence the most for direct clinical practice. Our findings are consistent with the literature, which shows that clinical competence is developed through a combination of practice and education. However, there is still a lack of development in some aspects of clinical knowledge. The students with the lowest level of clinical competence developed their clinical competence regarding direct clinical practice significantly more than the students with the highest level of clinical competence. The difference between students with high and low level of clinical competence was maintained during the education. This is the first time that a longitudinal survey has been conducted to explore the development of clinical competence in primary healthcare in a population of advanced practice nursing students. The findings are significant, and the results predict the development of clinical competence.



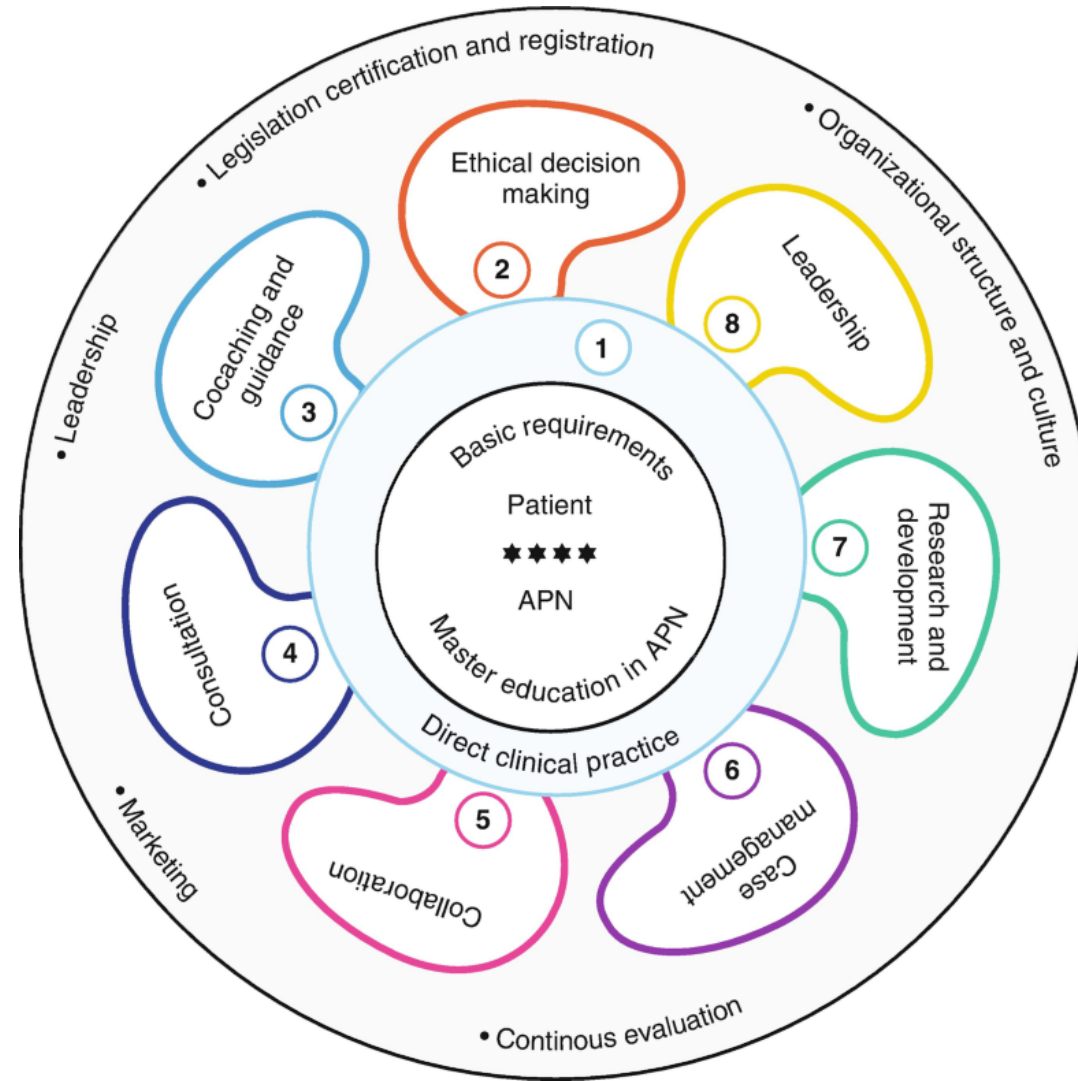
University of South-Eastern Norway
 Faculty of Health and Social Sciences

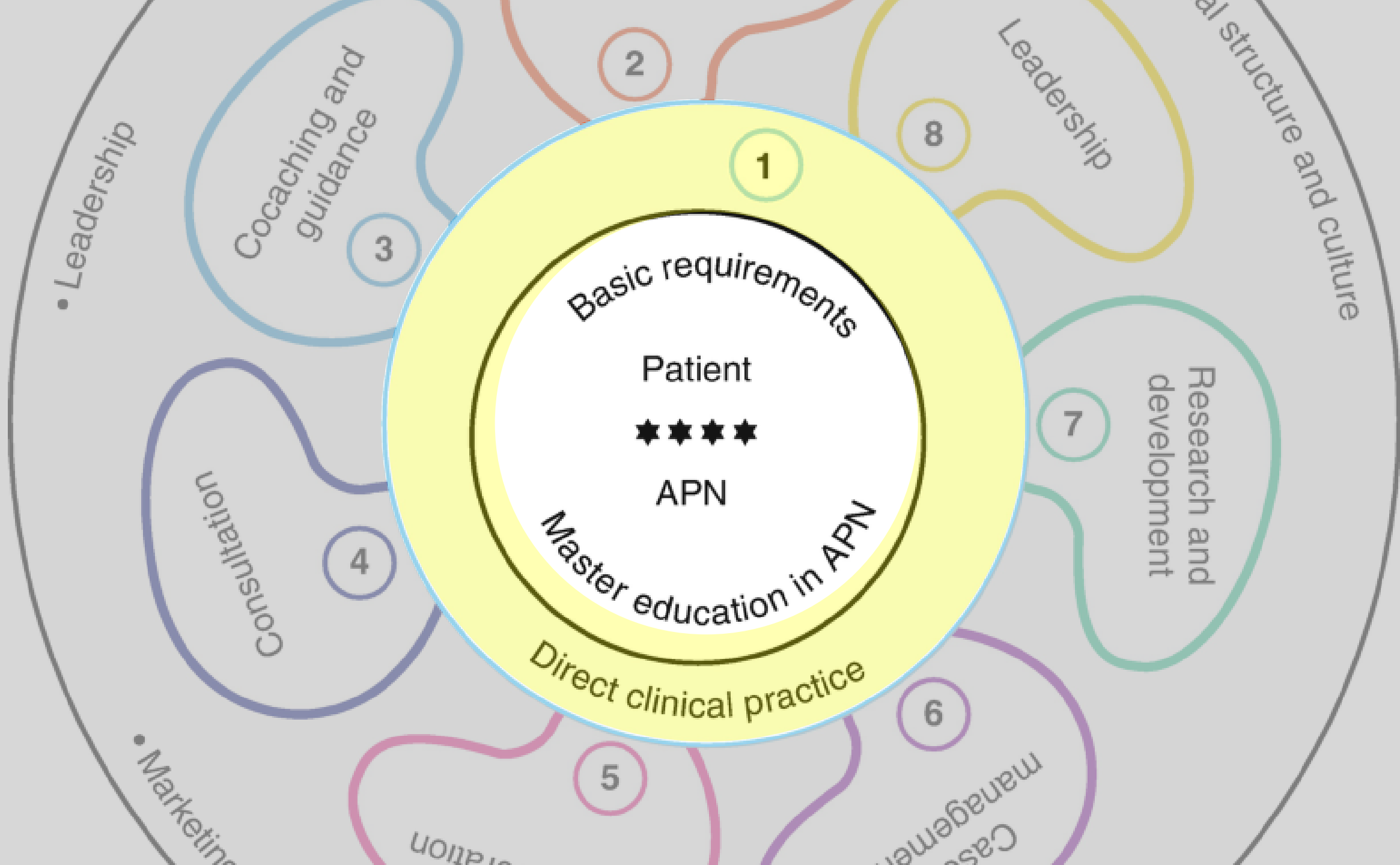
Doctoral dissertation no. 148
 2023

Ingrid Taylor Advanced practice nursing students' development of clinical competence – A Norwegian mixed-methods study



Emperiske funn i lys av the caring APN model





Basic requirements

Patient

★★★★

APN

Master education in APN

Direct clinical practice

1

2

8

3

7

4

6

5

• Leadership

Cocaching and guidance

Leadership

Organizational structure and culture

Research and development

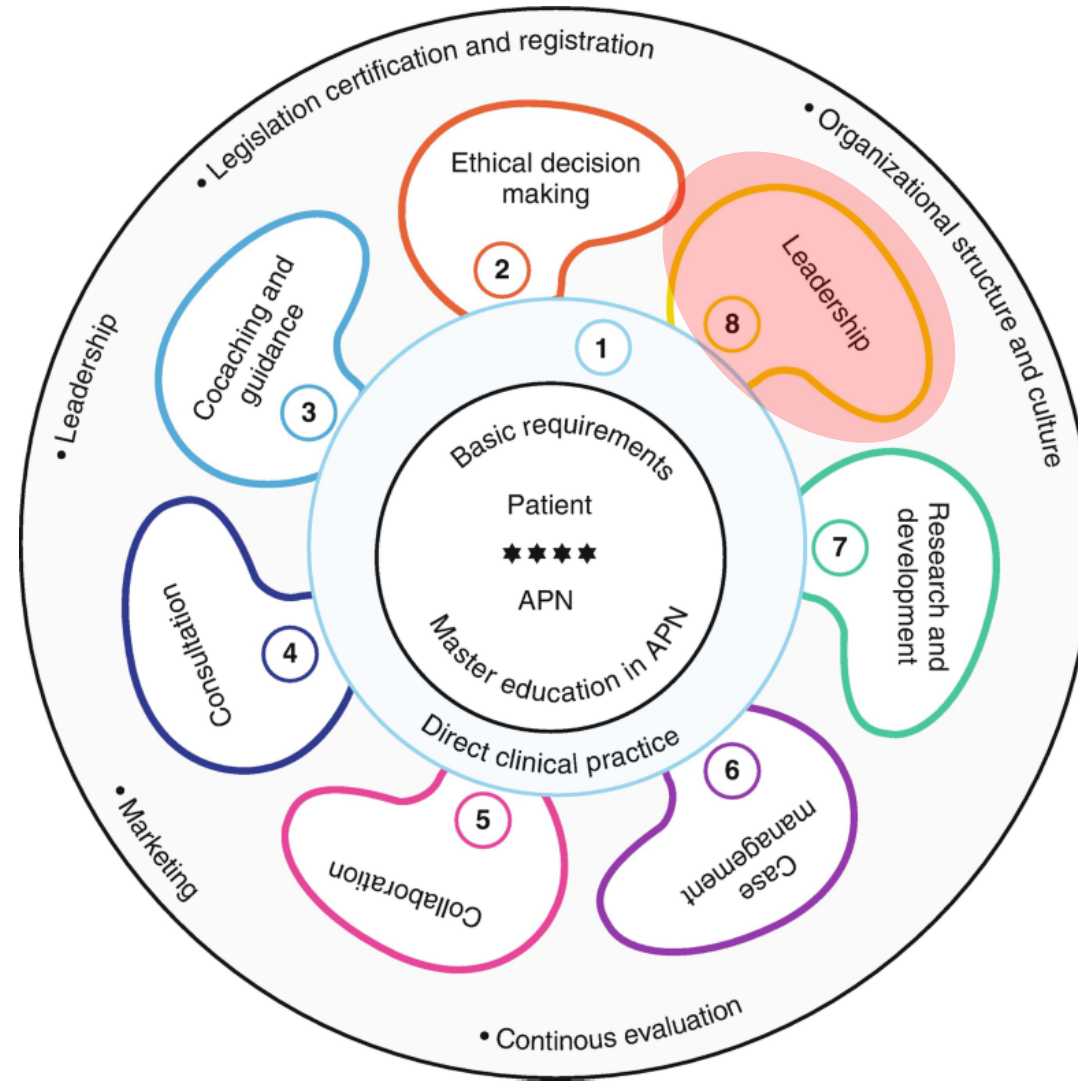
Consultation

• Marketing

Consultation

Case management

Emperiske funn i lys av the caring APN model





Erfaring og kompetanse

Konklusjon

- AKS studentene utviklet sin kliniske kompetanse i tråd med nasjonal og internasjonal standard
- De formelle rettighetene for AKS setter parameter for klinisk kompetanseutvikling





Implikasjoner

- Spesialistgodkjenningen
- Utvidede ansvarsområder med tilhørende formelle rettigheter

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The background is a complex, abstract painting. It features a variety of colors including teal, yellow, maroon, and white. The composition is filled with overlapping shapes and textures that suggest botanical elements like leaves, stems, and seed pods, as well as geometric patterns. The style is expressive and layered, with some areas appearing more detailed than others. A white rectangular box is superimposed over the center of the image, containing the text.

Takk for oppmerksomheten