

**Exploring the Challenges to Advanced Practice Nursing Role Implementation
in the Nordic Healthcare Settings: A Scoping Review**

Master's Thesis

CARING SCIENCE

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Abstract

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Background: Advanced practice nursing roles were established to fill the gap created by the shortage of general practitioners, and to improve access to healthcare services. However, incorporating the APN role into the healthcare system presents significant challenges.

Aim: To identify the challenges to the advanced practice nursing role implementation in the Nordic healthcare environment.

Method: A scoping review of the literature was conducted using the 2020 JBI guidance. A search of the literature was performed in electronic databases, CINAHL, APA PsycINFO, PubMed, MEDLINE, ProQuest Dissertation, and Theses, from January 23 to February 21, 2023, and updated in January 2024. 70 articles were retrieved, 37 full-text articles selected 10 articles, and one grey literature a total of eleven research articles were included in the study, and data was extracted and analyzed.

Results: The seven main challenges noted were 1) team-specific challenges, 2) organizational-specific challenges, 3) advanced practitioner-level challenges, 4) health-specific challenges, 5) educational-specific challenges, 6) regulatory considerations, and 7) economic-specific challenges.

Conclusions: To ensure the successful incorporation of the advanced practice nursing role within the Nordic healthcare system, it is important to recognize and address the challenges obstructing advancement. Important measures to consider include role clarity, job descriptions, and engaging stakeholders throughout the implementation process.

Foreword

As I embark on my career as an advanced practice nurse, I am filled with gratitude and accomplishments. This thesis represents years of persistent effort, dedication and commitment to advancing within the nursing profession. Nursing to me is far beyond just a career and I feel honoured and fortunate to be in a position where I can make a difference in people's lives, especially during tough times. I have been inspired by the strength of the patients, the support and guidance from my teachers, and the collaborative spirit of my peers. Every lecture attended, clinical hours completed, and patient interaction experienced have made me the nurse that I am today.

This Thesis explores the challenges of introducing the advanced practice nursing role in the Nordic healthcare system, a topic that is important to me. My research is targeted at improving nursing care, enhancing patient outcomes, and expanding the collective knowledge of the nursing profession. I would like to express my deepest gratitude to everyone who has supported me throughout this journey. To my supervisor, Susanna Nylund, thank you for your invaluable guidance and wisdom. To my family, siblings and friends, your unwavering encouragement and love have kept me going, and to my patients, I have learned more from you than I ever could from a textbook.

As I step into the next phase of my professional journey, I take with me the lessons I have learned, the experiences I have gained, and the vision of a healthcare system rooted in compassion, inclusivity and continuous improvement. Through this thesis, I hope to inspire others to pursue nursing with passion, dedication and a commitment to excellence.

Victoria Ndu

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Table of contents

Abstract

Foreword

1 Introduction	1
2 Background	4
2.1 Advanced Practice Nursing Role.....	4
2.2 Advanced Practice Nursing Scope of Practice	5
2.3 Advanced Practice Nursing in Nordic Countries	6
3 Aim and Research Questions.....	9
4 Methodology	10
4.1 Design and context	10
4.2 Search strategy.....	11
4.3 Study selection.....	12
4.4 Data extraction.....	14
4.5 Data analysis.....	14
4.6 Study characteristics	15
5 Ethical Consideration	21
6 Results	22
6.1 Team-specific challenges	32
6.2 Organizational-specific challenges.....	33
6.3 Advanced practitioner-level challenges	34
6.4 Healthcare-specific challenges	35
6.5 Educational-specific challenges	36
6.6 Regulatory considerations	36
6.7 Economic-specific challenges	37
7 Discussion.....	38
8 Methodological considerations.....	41
9 Conclusion.....	42
References	43

Figure 1. PRISMA Flow Chart of the selection process	13
Table 1. Data extraction.....	16
Table 2. Team-specific challenges	23
Table 3. Organizational-specific challenges	25
Table 4. Advanced practitioner-level challenges	27
Table 5. Healthcare-specific challenges	29
Table 6. Educational-specific challenges.....	30
Table 7. Regulatory considerations.....	30
Table 8. Economic-specific challenges	31

1 Introduction

Currently, healthcare systems around the globe are experiencing immense transformation owing to population growth and an increased need for improved healthcare services (Fatemi et al., 2020; Miranda Neto et al., 2018; Taylor et al., 2022; Wisur-Hokkanen et al., 2015). The rise in demand for quality healthcare services and the shortage of general practitioners have led to healthcare authorities championing the reconstitution of various workforces. Consequently, many countries have created a new primary system that institutes and develops the roles in advanced practice nursing (Gysin et al., 2019; Wisur-Hokkanen et al., 2015). Advanced practice nursing roles were created to accomplish specific duties and to fill the gap created by the shortage of general practitioners, to guarantee faster access to services and a shorter waiting period for care (Unsworth et al., 2022).

Advanced practice nursing (APN) is the blanket term for nurses practising at an elevated level. This class of nurses uses their higher education skills and knowledge to carry out the healthcare needs of communities, families, and individuals (Fatemi et al., 2020; Wisur-Hokkanen et al., 2015). The clinical nurse specialist (CNS) and the nurse practitioner (NP) are the well-known categories of APN roles. The role of a clinical nurse specialist differs from specialist nurse. While specialist nurses have advanced education and expertise in specific areas like surgery, intensive care and other specialized areas, they lack the advanced clinical assessment skills acquired through a master's or doctoral degree in advanced practice nursing (Fagerström 2021, ICN, 2020). In this review, "advanced practice nursing" refers to both "clinical nurse practitioner" and "nurse practitioner." Other APN roles especially in the United States of America include certified registered nurse anesthetist and certified nurse midwife, (APRN consensus model, 2008; Finnish Nurses Association (FNA), 2016; ICN, 2020).

Advanced nursing practice (ANP), on the other hand, refers to an area of nursing that broadens and expands the scope of nursing practice, contributes to nursing knowledge, and promotes the advancement of nursing (Finnish Nurses Association, 2016; ICN, 2020). Generally, it is expected that nurses with a master's degree be considered qualified for advanced nursing practice and not necessarily advanced practice nursing. Nurses in advanced practice nursing require a master's degree or a doctoral degree as well as superior clinical skills, competencies, and scope of practice compared to nurses in advanced nursing practice (Bryant-Lukosius et al., 2016). The advanced practice nursing role is a different type of role in which nurses perform at an advanced level of practice. These roles include all domains of advanced nursing practice

and require not only educational qualification but also clinical experience, licensure, and certification. The advanced practice nursing roles and scope of practice include providing direct and indirect care, patient teaching, and supervision, ordering tests, prescribing medication, consultations, coordination, treatment, and leadership (Henni et al., 2018; Nieminen et al., 2011). Furthermore, advanced practice nurses are professionally independent and have highly developed skills in decision-making, health assessment, and diagnosis. This makes them well-equipped to assess patient needs and implement effective healthcare plans (Fatemi et al., 2020).

The challenges to the effective implementation of the APN roles have been examined in a series of studies. Many of the studies concluded that lack of awareness, lack of clarity about the APN roles, lack of support from most organizations, lack of support from employers and colleagues, and other healthcare workers are the major problems in the implementation of APN roles. Other factors are confusion among the APNs as well as fellow professionals (Schönenberger et al., 2020). The feeling of physical and social isolation, poor recognition within the community, lack of collective understanding regarding the APN role, and loss of professional identity, for example, shifting from a nurse focused on traditional nursing duties to a nurse carrying out medical or clinical assignments are also key challenges (Gysin et al., 2019; Josi et al., 2020; Miranda Neto et al., 2018; Nigenda et al., 2021; Unsworth et al., 2022).

In the Nordic countries, there is a notable scarcity of research addressing the challenges to implementing advanced practice nursing roles within the Nordic healthcare settings, leading to limited availability of research literature on this subject area. The first evaluation of the advanced practice nursing role in Finland and the challenges associated with its implementation was published by Fagerström & Glasberg in 2011, this initial study on this subject area was followed by further research from Jokiniemi et al. in 2015 and Wisur-Hokkanen et al. also in 2015. Recently, a survey by Jokiniemi et al. (2023), was published based on research conducted between 2017 and 2018. In Sweden, Ljungbeck et al. published a 2023 study which examined the challenges to APN role performance in elderly care, while in Norway, Boman et al. (2022) conducted a study that focused on the implementation of the APN role in emergency care.

Despite the existing literature, there is still a need for updated investigations of the challenges of incorporating advanced practice nursing roles in diverse healthcare settings. This is particularly crucial as an increasing number of institutions in the Nordic countries are adopting and offering training for more advanced practice nurses. The outcomes of this scoping review

intend to provide insight into challenges to advanced practice nursing role integration in the Nordic healthcare environment.

2 Background

The background of this scoping review explains advanced practice nursing and the diverse terms for advanced practice nursing. It discusses advanced practice nurses' roles, scope of practice, and responsibilities. This includes the skills APNs need to work independently, the education and expertise that make the APNs different from the RNs and what they are allowed to perform particularly within Nordic healthcare environments.

2.1 Advanced Practice Nursing Role

Role characteristics define and distinguish advanced practice nursing from general nursing through domains such as education, practice, leadership, research, and regulation. APNs' advanced knowledge allows them notable autonomy in community-based services (Kilpatrick et al., 2023), with their recognition and role expanding over time (ICN, 2020). According to the International Council of Nurses (ICN), an advanced practice nurse is a specially trained registered nurse who has at least a master's degree, broad general knowledge and expertise to make complex decisions, and capabilities for advanced nursing practice based on the specific context or country in which they are licensed to practice (ICN, 2020). APNs are equipped with advanced education and have a wide range of responsibilities. They follow specific rules that allow them to manage complex healthcare problems, integrate research into practice, and provide leadership (Fagerström, 2021; Kilpatrick et al., 2023). APNs' who have completed their master's degree must have their educational qualifications recognized by a credentialing system. They provide both direct and indirect healthcare services and focus on advanced care, illness prevention, cure, and chronic disease management (ICN, 2020). APNs manage full episodes of care and oversee challenging healthcare problems including those in vulnerable populations. Fagerström, (2021) and Kilpatrick et al. (2023) highlighted in their studies that APNs possess advanced clinical skills, including, assessment, decision-making, and diagnostic reasoning. APNs have the authority to diagnose conditions, prescribe medications, order laboratory tests, refer patients and manage admissions and discharges. Titles such as clinical nurse specialist and nurse practitioner are legally protected. In primary healthcare settings, APNs are the initial contact for patients and families (ICN, 2020).

2.2 Advanced Practice Nursing Scope of Practice

The advanced practice nurse has advanced expertise and leads in their specialty, offering direct patient care and engaging in activities indirectly influencing patient care, such as consulting and developing guidelines. Their scope of practice includes evaluating disease patterns, technological advancements, and environmental conditions, and ensuring evidence-based practices (Fagerström, 2021). Advanced practice nurses have a legally defined scope, requiring at least a master's degree, focusing on advanced clinical skills and autonomous practice. They provide direct clinical care, health promotion, and disease prevention and collaborate with other healthcare professionals. Both CNS and NP integrate education, research, and leadership into their roles to enhance nursing practice (ICN,2020).

Nurse practitioner: A nurse practitioner is a specialized nurse who combines both nursing and medical skills to examine, diagnose, and care for patients in primary healthcare and acute care settings. The nurse practitioner also provides continuous care for people with chronic illnesses ((Fagerström, 2021; ICN, 2020).

Clinical Nurse Specialist: A clinical nurse specialist is a highly skilled nurse who gives expert advice and care in specialized areas of medicine. The CNS works as part of the healthcare team and uses a system approach to treat patients with established diagnoses (ICN, 2020). The CNS and NP in this position provide independent clinical care and promote health and ethical decision-making. They are involved in patient and family education, evidence-based practices, instruction and mentorship, conducting research, facilitating cooperation, and offering management, and consultation services (FNA, 2016).

Title protection: Title protection in advanced practice nursing refers to the legal and regulatory measures that restrict the use of specific professional titles, such as nurse practitioner, clinical nurse specialist, certified nurse midwife, and certified registered nurse anaesthetist, to only those who have met the required educational and licensure criteria. These measures are put in place to prevent unauthorized individuals from using these titles, thereby ensuring the public's safety, and maintaining the professional integrity of the advanced practice nursing roles (Wheeler et al., 2022; ANA, 2021).

2.3 Advanced Practice Nursing in Nordic Countries

The discussion of advanced practice nursing in the Nordic country is incomplete without acknowledging its origin. The concept of advanced practice nursing role originated in the United States of America in the 1960s, gradually spreading to Canada, Australia, the United Kingdom and beyond. By the beginning of the 21st century, these roles had reached a global scale, including the Nordic countries (FNA, 2016). The APN role was introduced in the Nordic countries in the early 2000s, starting with Sweden, followed by Finland (Boman et al., 2019), and then Norway. The clinical nurse specialist role development in the Nordic countries shares similarities with the United States of America clinical nurse specialist, originating from the need to address healthcare challenges. The role expanded over time to include providing specialized patient care, cooperating with healthcare teams, mentoring nurses, and advancing nursing science. (Jokiniemi et al., 2020).

The first Nordic country to establish an advanced practice nursing program was Sweden. The University of Skövde, Sweden, established the APN program in 2003 and the first set of nurses graduated from the program as advanced clinical nurse specialists (120 credits) in 2005. They were the first set of APN students as well as the first APN graduates from the Nordic countries (Altersved et al., 2011; Jangland et al., 2014; Lindblad et al., 2010). In Sweden, the advanced practice nursing title is advanced clinical nurse specialist (ACNS) (Lindblad et al., 2010). On a national level, the advanced practice nursing role has not been defined. There is no title protection by law and a limited number of positions are available to advanced practice nurses. The APNs in Sweden have no rights to prescribe medications and order treatments (Lindblad et al., 2010), and there is no formal establishment of the role; consequently, the role is underutilized (FNA, 2016).

The Finnish Nurses Association (FNA) board put in place an advanced practice nursing group of experts in the spring of 2013. This group of experts was assigned to identify what the term APN means in Finland and also to describe the job titles and the roles in which APNs work in Finland. They were also assigned to identify the competence requisite for APN roles and the type of training needed to work in these roles (FNA, 2016). Internationally, the roles of APNs differ depending on the training they need and the regulations, rights, and legislation in individual countries. Researcher, teacher, and manager are other advanced roles for nurses, but the clinical nursing aspects are the difference between APN and other advanced nursing roles (FNA, 2016). The Finnish Act on Healthcare Personnel demands nurses must have a proper qualification from a university of applied sciences and must be registered by Valvira (National

Supervisory Authority for Welfare and Health), so that Valvira will have a record of all healthcare professionals (Rafferty et al., 2019). The Bachelor of Nursing degree (general nursing) program in Finland requires three-and-a-half years to complete, amounting to 210 ECTS credits. Conversely, the midwifery program extends over four-and-a-half years, comprising 270 ECTS credits (study info Finland, 2022). Both the general nurse and the midwife hold the title of registered nurse (Rafferty et al., 2019).

Novia University of Applied Sciences was the first university in Finland to introduce a master's degree program for APNs that complied with the ICN 2006 guidelines for APN education (Wisur-Hokkanen et al., 2015). In December 2006, the first group of 17 APNs in Finland graduated (Fagerström and Glasberg, 2011). Åbo Akademi University (ÅAU), introduced the first English-language master's degree program (120 ECTS credits) in advanced practice nursing in fall 2021. Also, the APN program at Jyväskylä University of Applied Sciences began in the fall of 2023 as a 90 ECT master's degree. To be accepted into the advanced practice nursing program at Finnish universities, students are required to have completed a bachelor's degree program in nursing, midwifery, public health nursing, and paramedic nursing at a university of applied sciences or other universities (ÅAU, 2024; JAMK, 2024; Studyinfo, 2024). They must have a minimum of a two-year of work experience after graduating from the bachelor's degree program (Finlex, 2014), the APN program at the university is for two years (ÅAU, 2024; JAMK, 2024; Studyinfo, 2024). The APN program at the university is designed to further improve nurses' competencies in evidence-based, person-centred, and effective clinical nursing which obviously will contribute to high-quality care, patient safety, and patient satisfaction (ÅAU, 2022; study info, 2022). In addition, the program is designed to expose students to skills in evidence-based practices, managing health problems, and improving patient care. The goal is to have highly skilled nursing that will combine leadership, education, and research while giving a strong focus on direct advanced clinical care.

The APN titles in Finland are CNS and NP. There is no consistent national education program, no collective agreement on the legislative and regulatory process, and no protected titles for these roles (Jokiniemi et al., 2014; Wisur-Hokkanen et al., 2015). The main problem encountered by the APNs in Finland is a lack of awareness of the APNs and the APN roles (Jokiniemi et al., 2015; Wisur-Hokkanen et al., 2015). Finland is the only Nordic country where nurse practitioners are authorised to work at advanced practice levels in primary care, with limited prescribing rights (Boman et al., 2019; Fagerström, 2021). However, the role is still restricted by limited autonomy and unclear responsibilities (Boman et al., 2019).

The first master's degree program in advanced practice nursing was introduced at the University of Oslo, Norway in 2011 (Henni et al., 2018). The aim was to equip students with advanced knowledge, competence, and skills to assess, treat, and follow up on minor health problems and patients' chronic diseases. (Hansen et al., 2021; Hansen et al., 2020). The program was also created to focus on the advanced geriatric nursing (AGN) role. AGNs were initially set apart to practice in primary healthcare, however, they can work in hospitals (Henni et al., 2018). The new APN roles in Norway are in primary healthcare and are being developed continuously. In Norway, a Bachelor of Nursing education lasts for three years. Registered nurses can continue their studies in any specialized nursing field such as surgery, intensive care, or acute care, or go for a master's degree program in nurse practitioner or midwifery (Hansen et al., 2020). According to Hansen et al. in their 2020 study, one of the challenges faced by nurse practitioners in Norway is that the NPs are not allowed to write any prescriptions, and they have no autonomous prescribing rights. Efforts to locate relevant research articles regarding this subject matter from Denmark and Iceland proved challenging hence the omission from this study.

3 Aim and Research Questions

Aim: This study aims to identify the possible challenges to the advanced practice nursing role implementation in Nordic healthcare settings.

The Research question: What challenges related to the role implementation do the advanced practice nurses in the Nordic healthcare setting encounter?

4 Methodology

The scoping review methodology was initially introduced by Arksey and O'Malley, and it was later developed by Levac, Colquhoun, and O'Brian, and further improved by JBI methodological guidance (Peters et al., 2021). In 2005, the first framework for scoping review was published and since then a more detailed perspective of methodological and reporting guidelines has been developed (Peters et al., 2015a). Scoping reviews are popularly used to review health research evidence. A scoping review intends to provide a comprehensive view of the existing information, the quality notwithstanding. Therefore, in the scoping review, the quality of the included literature is not assessed (Peter et al., 2021). A scoping review is done to investigate the extent, and nature of study activity, and identify gaps in the existing studies (Arksey & O'Malley, 2005; Levac et al., 2010). In a scoping review, it is possible to incorporate a variety of research designs and both published and unpublished literature, discuss questions, and produce relevant results.

Arksey and O'Malley (2005) initiated a six-stage methodological framework: which includes (I) identifying the research question, (II) searching for relevant studies, (III) selecting studies, (IV) charting the data, or collating, (V) summarizing, and reporting the results, and (VI) consulting with stakeholders to inform or validate study findings. The sixth stage is optional (Levac et al., 2010). According to Peters et al. (2020), and Peters et al. (2021), the latest and modern approach to reporting scoping reviews is the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Review (PRISMA-ScR), which is based on the JBI PRISMA statement and checklist, and methodological guidance for scoping reviews. The quality and value of a scoping review can be improved by using the PRISMA-ScR. Peters et al. (2021) further stated that, unlike other methodological guidelines, PRISMA-ScR does not prescribe a specific way to conduct reviews, but rather a complementary checklist for presenting methods and findings in a comprehensive approach.

4.1 Design and Context

This study was performed following the Joanna Briggs Institute (JBI) methodological guidelines for scoping reviews and the reporting standards set out in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) guidelines were adhered to. The approach of using the Participant, Concept, Context (PCC) method to generate eligibility criteria was employed.

Population: The advanced practice nurses in direct patient care roles which include clinical nurse specialists and nurse practitioners. These are considered the participants.

Concepts: The concept of this review was advanced practice nurse roles and the challenges to role implementation in healthcare settings.

Context: This scoping review examined studies that have been conducted in any healthcare setting and geographical locations where advanced practice nurses are taken into employment with a focus on the Nordic countries.

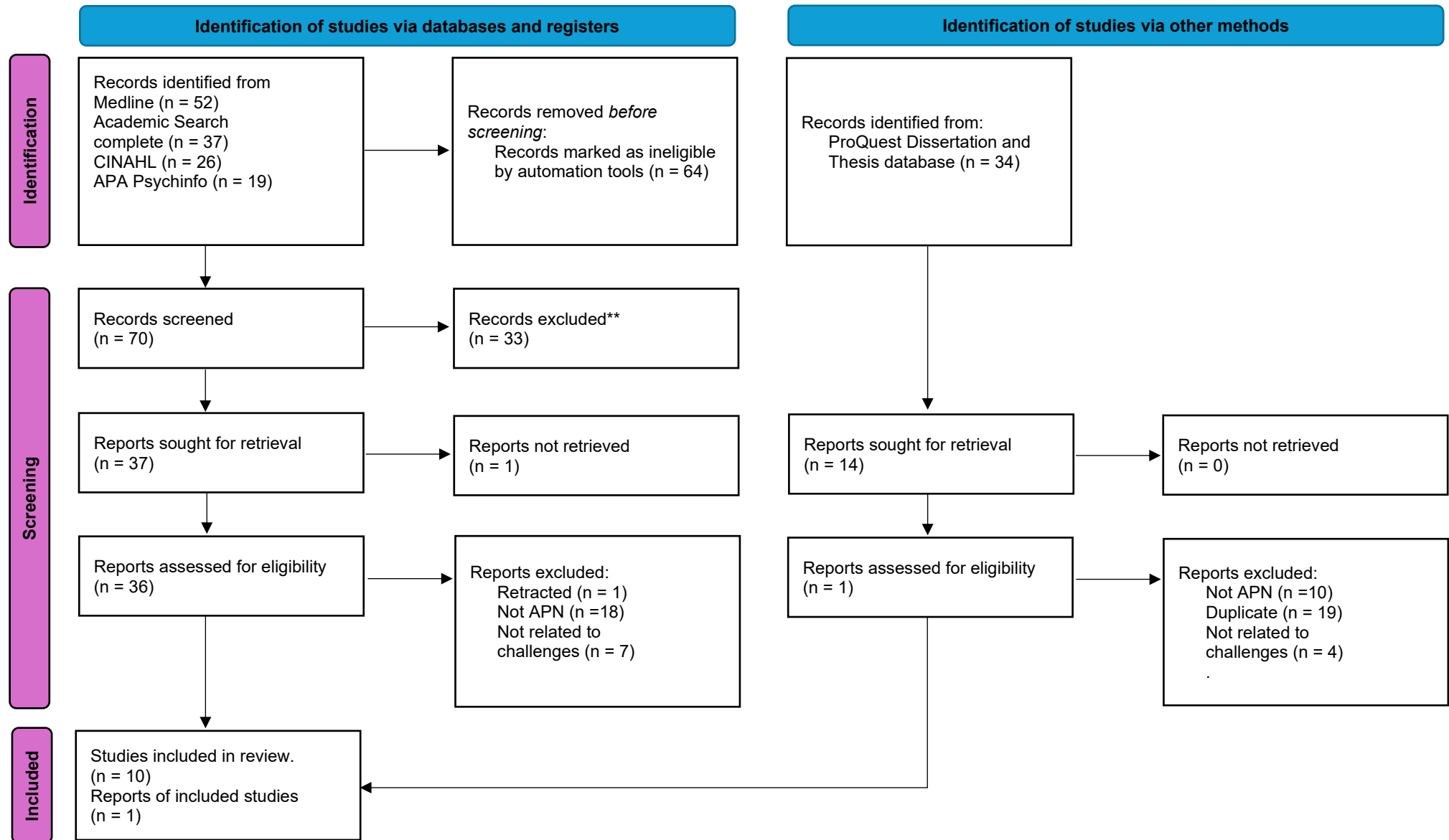
4.2 Search strategy

An extensive search strategy for databases was necessary to obtain published and unpublished resources regarding the current subject matter, which is the challenges to APN role implementation in the Nordic healthcare settings. In collaboration with the ÅAU academic librarian, a strategy for conducting a literature search was developed. The search result was reported using PRISMA-ScR. The following electronic databases were searched using EBSCOhost via the Åbo Akademi University library portal: CINAHL (Cumulative Index to Nursing and Allied Health Literature), MEDLINE, Academic Search Complete, APA PsycINFO, PubMed, and FINNA. FINNA is a search engine that assembles material from multiple Finnish entities in one place by using its adaptable search options. Unlimited items can be obtained from FINNA at no expense. A search of the ProQuest Dissertation and Theses database was conducted. The databases were searched from January 23 to February 21, 2023, and updated in January 2024. The Medical Subject Headings (MeSH) search term that was used in the search is “advanced practice nursing” OR “advanced practice nurse” OR “nurse practitioner” OR “clinical nurse specialist” AND “Nordic countries” OR “Finland” OR “Sweden” OR “Denmark” OR “Norway” OR “Iceland” AND “challenges” OR “barrier” OR “difficulties” OR “issues” OR “problems” OR “limitations” OR “obstacles” AND “roles”. To identify relevant information on this subject, a search was also conducted for grey literature using the ProQuest Dissertation and Theses database with the specific keywords “advanced practice nurse role”, and “advanced practice nurse role implementation”.

4.3 Study selection

The selection standards for this scoping review were established using the Joanna Briggs Institute methodology and included Participant, Concept, and Context criteria. Specifically, any research articles that addressed obstacles or difficulties related to advanced practice nursing roles were incorporated. The study designs that were taken into account for inclusion were primary studies, qualitative, quantitative, and mixed studies. Titles and abstracts were screened. At the abstract stage, the inclusion criteria required any study that addressed advanced practice nurses and advanced practice nursing. At the full-text stage, the study had to specifically mention nurse practitioner or clinical nurse specialist roles and discuss the challenges or barriers or any word synonymous with challenges. The author personally reviewed all abstracts and full texts identified in the search. To verify that all relevant references were included, a manual search was conducted for the articles, and grey literature. Grey literature is literature not published by an academic or commercial publisher, for example, conference papers, theses, and dissertations (university of Leeds, 2020). The search was limited to articles published in English. Articles and grey literature published between 2013 and 2023 were selected. However, studies published in other languages were excluded, and other articles on nurse managers and nurse prescribers were equally excluded. The search on the electronic databases retrieved 70 articles after the automatic removal of duplicates. The titles of all the articles retrieved were screened. All 70 abstracts were also screened by the author and 37 full-text articles were considered for inclusion. Eventually, 10 articles and one grey literature were selected for this study. The inclusion process is described in the flow chart in Figure 1.

Figure 1. PRISMA Flow Chart of the selection process



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71. For more information, visit: <http://www.prisma-statement.org/>

4.4 Data extraction

Literature was searched, screened and data were collated. The number of full-text articles identified for inclusion in this review was (n = 11). Data extraction was developed based on the study characteristics such as the title, the authors, year of publication, country of publication, research aim, methodology, study participants and the findings. The collated information was based on a PRISMA checklist to reduce inconsistencies (Elliott et al., 2016). The author independently gathered all the data. The summary of the data collated is represented in Table 1 below.

4.5 Data analysis

Typically, a scoping review is not intended to synthesize the results or outcomes of the included sources. Therefore, the analysis of the extracted data in many scoping reviews should be limited to basic descriptive analysis such as frequency counts of population, context and concept (Peters et al., 2021). Descriptive qualitative techniques such as basic coding of data into specific categories, can be effective in scoping reviews. The methods are beneficial when the aim is to identify key characteristics related to a specific concept. The approach to data extraction and analysis in scoping reviews is primarily guided by the objective of the study (Peters et al., 2021). Descriptive qualitative techniques features include flexibility in choosing different theories or philosophical frameworks, the ability to utilize a wide range of purposive sampling techniques, the use of observations document reviews or interviews with minimally to moderately structured interviews and focused groups, the application of content analysis and descriptive statistical methods and the presentation of descriptive summary that organizes the data in a way that best reflects its content (Colorafi and Evans, 2016).

The study employed content analysis for this scoping review, focusing on the alignment between the research question and the study's aim. Basic coding techniques were applied to categorize relevant information manually. A final check compared the method used in the review with Joanna Briggs Institute Guidance. The data analysis process began with a search for articles relevant to the research topic, followed by a thorough screening and review. Challenges related to APN role implementation were identified from 11 selected articles, consisting of 4 different methodological approaches (qualitative, quantitative, scoping review, and mixed method), 9 primary research articles, 2 secondary research articles, and one grey literature (Dissertation). The extracted data were then organized into codes and then

subcategories based on shared characteristics resulting in the identification of 35 subcategories. Similarities and differences within the subcategories were analyzed and further grouped into broader categories. Ultimately, 7 main categories were identified.

4.6 Study characteristics

A search of five databases yielded 134 articles. Sixty-four articles were automatically removed as duplicates, 70 articles remained and were manually screened for title and abstract. Thirty-three articles were excluded, and 37 articles were sought for retrieval but one was retracted and could not be retrieved, 36 articles assessed for eligibility were retrieved. Ultimately, ten (10) articles met the eligibility criteria and were included in the study. Additionally, 34 articles were identified from the ProQuest Dissertation and Theses database search. Only one article fulfilled the eligibility criteria. Overall, 11 articles were deemed eligible for this review. Figure 1 above illustrates the selection process and the criteria for exclusion. The 11 articles included comprise various research approaches. Nine of the articles included (81.8%) were primary research articles, and two were secondary research articles (18.2%). Six articles were qualitative which included three exploratory, one descriptive, one descriptive-reflective, and one descriptive phenomenology (54.5%). One quantitative study was a cross-sectional descriptive survey (9.1%). Others were 3 mixed method studies (27.3%), and one scoping review (9.1%). The details of the characteristics of the included articles are presented in Table 1. The majority of the included studies published between 2015 and 2023 were conducted in Nordic countries, 4 were conducted in Sweden, two in Finland, two in Norway, one in Scandinavia, one in Ireland, and one in the United States of America.

Table 1. Data extraction

Author and year	Type of evidence source	Research aim	Method used	Method of data collection	Context/Country	Sample
Andregård & Jangland (2015)	Secondary	To explore the obstacles to, and the opportunities for, achieving optimal interprofessional team collaboration with the introduction of NP	Quantitative	Systematic literature review	Sweden	Research articles n = 26 From 7 countries
Angelow (2018)	Primary	To explore the process of NP role transition and discover the lived experiences associated with this role transition	Qualitative	Unstructured interviews	USA	Nurse practitioners n = 8 Female n = 7 Male n = 1
Boman et al. (2022)	Primary	To describe and critically reflect on how the PEPPA framework was used to develop a new model of care for the NP role in an ED in Norway	Qualitative	Semi-structured interviews	Norway	n = 1 nurse shadowed n = 9 nurses working in ED

Table 1. (continued)

Author and year	Type of evidence source	Research aim	Method used	Method of data collection	Context/Country	Sample
Boman et al. (2019)	Primary	To explore the feasibility of introducing geriatric nurse practitioners in primary health care in Scandinavia, from multi-professional and older persons' perspectives	Qualitative	Semi-structured interviews	Europe North and Scandinavia	n = 25 Physicians n = 5 Nurses n = 5 Politicians n = 5 Nurse leader n = 5 Older adults n = 5
Elliott et al. (2016)	Secondary	To identify the barriers and enablers to advanced practitioner's ability to enact their leadership role	Pre-set inclusion criteria, scoping review	Data charting	Sweden	Research articles for scoping review n = 34

Table 1. (continued)

Author and year	Type of evidence source	Research aim	Method used	Method of data collection	Context/Country	Sample
Henni et al. (2019)	Primary	To investigate the level of integration of Advanced geriatric nurses in their fields of practice	Quantitative	Cross-sectional descriptive survey	Norway	n = 218 Nurse practitioner = 23 Female n = 21 Male n = 2 Colleagues n = 195 Female n = 175 Male n = 20
Jangland et al. (2016)	Primary	To explore how the first Swedish NPs in surgical care experienced their transition into this new nursing role and what competencies they used in the interprofessional team	Qualitative	Interviews	Sweden	Student nurse practitioners n = 8

Table 1. (continued)

Author and year	Type of evidence source	Research aim	Method used	Method of data collection	Context/Country	Sample
Jokiniemi et al. (2023)	Primary	To describe the CNS role and its outcomes and challenges in specialist medical health care	Mixed method	Participatory action research (PAR)	Finland	n = 21 Female n = 15 Male n = 6
Jokiniemi et al. (2015)	Primary	To identify and examine the expert panelists' visions on future CNS role implementation, and to generate questions as well as supporting and opposing views for further exploration	Policy Delphi mixed method	Questionnaires	Finland	Expert panelist n = 66 First round n = 25 Second round n = 22 Third round n = 19

Table 1. (continued)

Author and year	Type of evidence source	Research aim	Method used	Method of data collection	Context/Country	Sample
Ljungbeck & Sjögren Forss (2017)	Primary	To investigate the opinions of managers, doctors, and nurses in primary care and municipal healthcare about the role of ANPs in municipal healthcare as a way to meet the increasing healthcare needs of the frail elderly	Qualitative	Semi-structured interviews	Sweden	Stakeholders in the development of NP role n = 27 Female n = 22 Male n = 5
Ljungbeck et al. (2023)	Primary	To investigate how stakeholders at the national level express the challenges and opportunities of the evolving nurse practitioner role in Swedish municipal elderly care	Delphi survey technique Mixed method	Questionnaires	Sweden	Managers from primary care n = 12 Female n = 10 Male n = 2

5 Ethical Consideration

Åbo Akademi University adheres to the European Code of Conduct for Research Integrity and the rules set forth by the Finnish National Board on Research Integrity (TENK) regarding the ethical conduct of research and the procedures for processing misconduct claims in Finland. Moreover, different fields of study observe their own guidelines (Åbo Akademi Instruction on Ethics, 2020).

In this particular research, there was no involvement of data collection from any individual, be it, students, patients, or employees. It is a scoping review; therefore, ethical approval was not required for the review.

6 Results

Result related to the challenges to advanced practice nursing role implementation

Following the descriptive qualitative techniques, specific challenges were identified and organized into seven main categories, which are: (1) team-specific challenges, (2) organizational-specific challenges, (3) advanced practitioner-level challenges, (4) healthcare-specific challenges, (5) educational-specific challenges, (6) regulatory considerations, and (7) economic-specific challenges. Thirty-five subcategories were initially identified, and the subcategories were subsequently grouped into seven main categories. The unevenness across the main categories was evident with the advanced practitioner level having more challenges, as highlighted in the sections that follow.

(1) Team-specific challenges include explanation and repeated clarification, single position, interprofessional conflict, physician resistance, task redistribution, supervision and collaboration, and limited peer support. **(2)** Organizational-specific challenges: role clarity and scope of practice, acceptance and reception, acceptance process, clinical workload challenges, inadequate resources, uncertainty of responsibility, leadership aspect, and separation between nurses and physicians. **(3)** Advanced practitioner-level challenges: loss of professional identity, low self-esteem, sense of guilt, insufficient leadership skill development, insufficient time within their roles, lack of leadership attributes of the APN, the quest for autonomy, threat to independence, and role transitioning challenges. **(4)** Healthcare-specific challenges: resistance from other health professionals, lack of opportunity for strategic leadership, specialization in the nursing area, resistance to change, and integration into healthcare teams. **(5)** Educational-specific challenges: consensus on NP education, and clinical training by physicians. **(6)** Regulatory considerations: lack of support for regulatory measures, and title protection. **(7)** Economic-specific challenges include economic constraints, low resource allocation, and inadequate compensation packages. The summary of the results related to challenges to APN role implementation is presented in Tables 2-8 below.

Summary of the results

Table 2. Team-specific challenges

MAIN CATEGORY	SUBCATEGORY	CHALLENGES/ RESULTS	AUTHOR
Team-specific challenges	Explanation and repeated clarification	Advanced practice nurses in the hospital setting faced significant obstacles in gaining acceptance within their professional team	Jangland et al. (2016)
	Single position	A challenge to effective leadership strategies and decision-making processes. APNs are lonely	Andregård & Jangland (2015)
			Elliott et al. (2016)
			Jangland et al. (2016)
	Interprofessional conflict	Conflicts between the seasoned nurses and the new nurse practitioners as well as concerns about the roles of less-experienced physicians.	(Andregård & Jangland (2015)
Jangland et al. (2016)			
Physician resistance	Physicians expressed concern regarding nurses' authority to prescribe medications	Boman et al. (2019)	

Table 2 (continued)

Main Category	Subcategory	Challenges/ Results	Author
	Task redistribution	Negatively impact patient care, teamwork, and professional growth within the healthcare settings	
	Supervision and collaboration	Uncertainty surrounding the availability of physicians to accomplish this supervisory role, potentially hinders the successful integration of NPs into the healthcare system	Ljungbeck & Sjögren Forss (2017)
	Limited peer support	Absence of a peer support network affects NP professionals to exchange experiences, cooperate, and seek advice from colleagues in similar roles	Andregård & Jangland (2015) Henni et al. (2019) Jangland et al. (2016) Jokiniemi et al. (2015) Jokiniemi et al. (2023)

Table 3. Organizational-specific challenges

MAIN CATEGORY	SUBCATEGORY	CHALLENGES/ RESULTS	AUTHOR
Organizational-specific challenges	Role clarity and scope of practice	Clear information regarding the role and scope of practice was deemed crucial at both unit and organizational levels... insufficient clarity resulted in role uncertainty, intra-team conflicts, and difficulties in collaborating and delivering optimal patient care	Angelow (2018) Andregård & Jangland (2015) Boman et al. (2019) Boman et al. (2022) Elliott et al. (2016) Henni et al. (2019) Jangland et al. (2016) Jokiniemi et al. (2023) Ljungbeck et al. (2023)
	Acceptance and reception	APNs encountered doubt and scrutiny about their competency from colleagues, particularly experienced nurses	Jangland et al. (2016)
	Acceptance process	acceptance process and integration into the organizational environment is slow	Jangland et al. (2016)

Table 3 (continued)

Main Category	Subcategory	Challenges/ Results	Author
	Clinical workload challenges	...affects the time available for advanced practitioners to engage in leadership endeavours	Elliott et al. (2016) Henni et al. (2019)
	Inadequate resources	lack of support for research activities limited the ability of APNs to execute their leadership duties	Elliott et al. (2016)
	Uncertainty of responsibility	APNs believed that role might consume too much of their time, interfering with the overall perception of their work	Jokiniemi et al. (2015)
	leadership aspect	APNs hesitate to assume leadership responsibilities in certain APN roles because some individuals within the organization believe it is unnecessary, unlikely to materialize, and overwhelm the APNs with time constraints	Jokiniemi et al. (2015)
	Separation between nurses and physicians	a challenge to introduce the APN role to municipal healthcare and implement the APN role	Henni et al. (2019) Ljungbeck & Sjögren Forss (2017)

Table 4. Advanced practitioner-level challenges

MAIN CATEGORY	SUBCATEGORY	CHALLENGES/ RESULTS	AUTHOR
Advanced practitioner-level challenges	Loss of professional identity	... in between traditional nursing roles and physician roles, leading to stress and a loss of professional identity	Boman et al. (2022) Jangland et al. (2016)
	Low self-esteem	The transition from an experienced nurse to a beginner in a new APN role affected the APNs' self-esteem,	Jangland et al. (2016)
	Sense of guilt	By leaving their traditional registered nurse role they believe they may have betrayed their experienced nursing colleagues	Jangland et al. (2016)
	Insufficient leadership skill development	Limit their capability to undertake leadership responsibilities in professional roles	Elliott et al. (2016)
	Insufficient time within their roles	hinders the ability to accomplish leadership responsibilities effectively	Elliott et al. (2016)

Table 4 (continued)

Main Category	Subcategory	Challenges/ Results	Author
	Lack of leadership attributes of the APN	lack of certain characteristics expected of a nurse practitioner harms the APN role	Elliott et al. (2016)
	The quest for autonomy	Physicians do not see the NP role as autonomous, they rather see the APN role as relying on others for guidance or support	Andregård & Jangland (2015)
	Threat to independence	Some healthcare team members and other nurses were uncomfortable with the presence of NPs. They felt that this new NP role might threaten their positions and independence	Andregård & Jangland (2015) Boman et al. (2022) Henni et al. (2019) Jangland et al. (2016)
	Role transitioning challenges	It was a difficult task for APNS to create awareness and gain acceptance for their new roles in their workplace particularly during the early implementation stage	Angelow (2018) Andregård & Jangland (2015) Boman et al. (2019) Elliott et al. (2016) Henni et al. (2019) Jangland et al. (2016) Jokiniemi et al. (2023) Ljungbeck et al. (2023)

Table 5. Healthcare-specific challenges

MAIN CATEGORY	SUBCATEGORY	CHALLENGES/ RESULTS	AUTHOR
Healthcare-specific challenges	resistance from other health professionals	conflicts arose when consultants scrutinized referrals made by nurses based solely on professional titles.	Boman et al. (2022) Jangland et al. (2016)
	Lack of opportunity for strategic leadership	Limitations to interprofessional collaboration, involvement in committees, and not having authority over budgets	Elliott et al. (2016)
	Specialization in the nursing area	Not all healthcare professionals in the organization advocate for specialization in nursing	Jokiniemi et al. 2015
	Resistance to change	Implementing changes in nursing roles met resistance from various stakeholders	Boman et al. (2019)
	Integration into healthcare teams	Without adequate support and clear guidance, the assimilation of NPs into established healthcare structures may encounter significant challenges	Ljungbeck et al. (2023)

Table 6. Educational-specific challenges

SUBCATEGORY	MAIN CATEGORY	CHALLENGES/ RESULTS	AUTHOR
Educational-specific challenges	Consensus on NP education,	Disparities in APN educational programs impede national consensus on standardization and quality assurance	Jokiniemi et al. (2015) Ljungbeck et al. (2023)
	Clinical training by physicians.	It is difficult for physicians to supervise the clinical training of nurse practitioners due to differences in training and professional background	Ljungbeck et al. (2023)

Table 7. Regulatory considerations

MAIN CATEGORY	SUBCATEGORY	CHALLENGES/ RESULTS	AUTHOR
Regulatory considerations	Lack of support for regulatory measures,	Although regulatory measures such as title protection and competency evaluation, are important, they receive low support from stakeholders	Jokiniemi et al. (2015)
	Title protection	The absence of title protection may lead to not being officially recognized and may undermine the legitimacy and effectiveness of the NP role.	Ljungbeck et al. (2023)

Table 8. Economic-specific challenges

MAIN CATEGORY	SUBCATEGORY	CHALLENGES/ RESULTS	AUTHOR
Economic-specific challenges	Economic constraints	A challenging financial environment affects the implementation of APN roles	Jokiniemi et al. (2015)
	Low resource allocation and compensation package	Convincing policymakers and stakeholders in the healthcare workforce to allocate resources and improve NP wages is a daunting task	Boman et al. 2019)

6.1 Team-specific challenges

Team-specific is a large category of challenges to advanced practice role implementation. One paper reported that advanced practice nurses in the hospital setting faced significant obstacles in gaining acceptance within their professional team. The frequent explanation and repeated clarification of their newly assumed roles posed a challenge in integrating APNs into established healthcare structures (Jangland et al., 2016). Three studies reported that inadequate representation of the advanced practice nurse in the healthcare team was considered a challenge to effective leadership strategies and decision-making processes. In other words, APNs have single positions and reported feeling lonely in organizational teams which limits their influence on leadership (Andregård & Jangland, 2015; Elliott et al., 2016; Jangland et al., 2016). Two papers reported instances of tension and resistance observed within the healthcare team notably in the conflicts between the seasoned nurses and the new nurse practitioners as well as concerns about the roles of less-experienced physicians. The tensions were due to differences in training and perspectives on patient care (Andregård & Jangland, 2015; Jangland et al., 2016).

Physician resistance was reported in one paper, Physicians were seen as opposition, some physicians expressed reservations regarding nurses' authority to prescribe medications, stressing the necessity of medical evaluation and expressing concerns about nurses taking the prescribing responsibilities. Nurse practitioners expressed their concerns regarding the transfer of tasks from physicians to nurses especially in initiating treatment and assessment for the patients. The physicians questioned the preparedness and skill levels of the nurse practitioner to effectively execute these tasks (Boman et al., 2019). Task redistribution issues were reported. This described the challenges within the healthcare teams relating to task redistribution. These issues negatively impact patient care, teamwork, and professional growth within healthcare settings (Boman et al., 2019). The challenge of the need for physicians to collaborate and supervise advanced nurse practitioners was reported. The study highlighted the uncertainty surrounding the availability of physicians to accomplish this supervisory role, potentially hindering the successful integration of NPs into the healthcare system (Ljungbeck & Sjögren Forss, 2017). Five papers reported limited peer support. The scarcity of positions for Advanced nurse practitioners within the hospitals led to restricted opportunities for peer support. The absence of a peer support network could impact the capacity of NP professionals to exchange experiences, cooperate, and seek advice from colleagues in similar roles (Andregård & Jangland, 2015; Henni et al., 2019; Jangland et al., 2016; Jokiniemi et al., 2015; Jokiniemi et

al., 2023). One study also reported that APNs received positive reviews having spent more time with patients during their role adjustment (Jangland et al., 2016).

6.2 Organizational-specific challenges

The organizational-specific challenges are also large categories of challenges to the implementation of advanced practice roles. Role clarity and scope of practice were the most prevalent challenges identified. Nine of the eleven papers reported that advanced practitioners face difficulties relating to role clarity and endorsement from organization management and clinical staff. Clear information regarding the role and scope of practice was deemed crucial at both unit and organizational levels, as insufficient clarity in these areas resulted in role uncertainty, intra-team conflicts, and difficulties in collaborating and delivering optimal patient care (Angelow, 2018; Andregård & Jangland, 2015; Boman et al., 2019; Boman et al., 2022; Elliott et al., 2016; Henni et al., 2019; Jangland et al., 2016; Jokiniemi et al., 2023; Ljungbeck et al., 2023). One study reported that advanced practice nurses experience different levels of reception when taking on new roles within the organization. Some APNs felt immediate support with the backing of department leaders, while others encountered doubt and scrutiny about their competency from colleagues, particularly experienced nurses. (Jangland et al., 2016). One paper reported that accepting new APN roles was described as an evolving and lengthy process, requiring sustained support from colleagues, mentors, and leadership. Essentially, the acceptance process and integration into the organizational environment and work cycle are ongoing processes rather than immediate events (Jangland et al., 2016). The clinical workload, which affects the time available for advanced practitioners to engage in leadership endeavours was reported by two studies (Elliott et al., 2016; Henni et al., 2019). Inadequate resources were also reported. Insufficient access to resources, such as finance, library databases, and computers, and lack of support for research activities limited the ability of APNs to execute their leadership duties (Elliott et al., 2016).

The perceived undesirability and uncertainty associated with the leadership component of the advanced practice nursing role were reported also, some advanced practice nurses argued that this aspect of the APN role might consume too much of their time, interfering with the overall perception of their work. (Jokiniemi et al., 2015). Furthermore, there were reports of the advanced practice nurse feeling hesitant to assume leadership responsibilities in certain advanced practice roles. This reluctance stems from the belief held by some individuals within the organization that this aspect of the APN role is unnecessary and unlikely to materialize.

They argued that taking on such responsibilities could potentially overwhelm the APNs with time constraints (Jokiniemi et al., 2015). Also, the authorities and responsibilities of NPs were perceived as uncertain. Task distribution, especially compared to physicians lacked clarity, prompting questions about similarities and differences compared to other specialized nurses. (Boman et al., 2019). Two studies reported the separation between nurses and physicians. The Nurse practitioners expressed concerns regarding the existing divide between doctors and municipal nurses, who are associated with different organizations. This organizational separation was perceived as a challenge to effectively introduce the advanced practice nurse role in municipal healthcare. Furthermore, the gap between these organizations was identified as a possible source of resistance to implementing the NP role. APNs anticipated resistance from physicians, due to the unfamiliarity and disruption caused by the introduction of a new role into the current healthcare structure. The structure of the organization and the work environment are pivotal in enabling advanced nurse practitioners to effectively apply their expertise. Challenges such as organizational separation and opposition from established healthcare professionals emerged as impediments to seamless role integration (Henni et al., 2019; Ljungbeck & Sjögren Forss, 2017).

6.3 Advanced practitioner-level challenges

This is the largest category. Within advanced practice nurse challenges, two papers documented the loss of professional identity by APNs. Advanced practice nurses struggle with their professional identity, they expressed feeling conflicted between their traditional nursing roles and physician roles, which led to stress and a loss of professional identity (Boman et al., 2022; Jangland et al., 2016). One document recorded the low self-esteem situation with the APNs. The transition from an experienced registered nurse to a beginner in a new advanced practice nurse role affected the APNs' self-esteem, leaving them feeling isolated without a clear professional identity (Jangland et al., 2016). One paper identified the sense of guilt of the APNs. It reported that nurse practitioners have guilty feelings regarding leaving their traditional registered nurse role. They believe they may have betrayed their experienced nursing colleagues (Jangland et al., 2016). In two separate publications, it was noted that advanced practitioners struggled with the development of their leadership skills. They do not have the prospect of leadership skill development through educational programs or mentoring. This may limit their capability to undertake leadership responsibilities in their professional roles (Elliott et al., 2016). One study indicated that advanced practice nurses experience time constraints within the role hindering their ability to accomplish leadership responsibilities effectively

(Elliott et al., 2016). The research results from one paper indicated that some advanced practice nurses lack certain characteristics expected of a nurse practitioner, such as issues which include self-perception as a leader, age or seniority, more experience, and thinking strategically were perceived as challenges (Elliott et al., 2016). There are inconsistencies in perceived independence between nurse practitioners and physicians resulting in conflicts. One paper reported that while the nurse practitioner sought autonomy, the physicians often see the NP role as relying on others for guidance or support instead of being fully autonomous (Andregård & Jangland, 2015). Four different documents reported that nurse practitioners were seen as a threat to the independence of other healthcare team members. Some other nurses were uncomfortable with the presence of NPs. They felt that this new NP role might threaten their independence and affect the utilization of their skills and knowledge (Andregård & Jangland, 2015; Boman et al., 2022; Henni et al., 2019; Jangland et al., 2016). The majority of the studies reported the APN role transitioning challenges. Advanced practitioners face challenges transitioning into a new role. It was a difficult task for the advanced nurses to create awareness and gain acceptance for their new roles in their workplace particularly during the early implementation stage (Angelow, 2018; Andregård & Jangland, 2015; Boman et al., 2019; Elliott et al., 2016; Henni et al., 2019; Jangland et al., 2016; Jokiniemi et al., 2023; Ljungbeck et al., 2023).

6.4 Healthcare-specific challenges

Under the healthcare-specific challenge category, resistance from healthcare professionals was reported in two papers. APNs within healthcare settings encountered resistance from colleagues at the hospital. Cooperation among different healthcare professionals is essential to optimal patient care delivery. However, conflicts may arise when consultants scrutinize referrals made by nurses based solely on professional titles. (Boman et al., 2022; Jangland et al., 2016). Lack of opportunity for strategic leadership was reported in one paper. Advanced practice nurses found themselves constrained in assuming strategic leadership positions. These challenges were from limitations in cross-boundary collaboration, committee involvement, and authority over budgets. (Elliott et al., 2016). Another study documented specialization in the nursing area. The debate over the necessity of the APN specializing in a particular area of nursing practice generated differing opinions regarding the importance of such specialization. While some healthcare professionals advocate for a more generalized approach to nursing practice which enhances quality knowledge and tailored care, others consider specialization

unnecessary. (Jokiniemi et al., 2015). Two other challenges that were reported include resistance to change where implementing changes in nursing roles requires bravery to confront established structures. This can be met with resistance from various stakeholders. Fear of redistribution of authority within hierarchical systems, where certain professional categories hold more power than others, may pose a notable challenge to the adoption of new roles (Boman et al., 2019). The next is the integration of new NPs into healthcare teams which need thorough planning and implementation strategies from the organization. Without adequate support and clear guidance, the assimilation of NPs into established healthcare structures may encounter significant challenges (Ljungbeck et al., 2023).

6.5 Educational-specific challenges

The findings showed that two papers under educational-specific challenges reported the consensus on NP education. It reported the importance of establishing a nurse practitioner education at the national level with clear specifications for the length of education, curriculum, and structure. It also highlighted the difficulty in standardizing and quality assurance in nurse practitioner education. This challenge could stem from concerns regarding the variations in the educational programs and potential disparities in the preparedness of the nurse practitioner (Jokiniemi et al., 2015; Ljungbeck et al., 2023). The consent to allowing the physicians to oversee the clinical training of the nurse practitioner was reported. Supervision presents a potential challenge in establishing effective and collaborative relationships due to the differing training and professional backgrounds between the physicians and the nurse practitioners NP (Ljungbeck et al., 2023).

6.6 Regulatory considerations

Two papers reported the regulatory challenges faced by APNs. Although the recognition of regulatory measures such as title protection and competency evaluation, is important, they receive low support in terms of probability, and temporary registration of the APNs with regulatory bodies is not expected to take place. (Jokiniemi et al., 2015). In addition, the imperative of title protection for the NP presents a regulatory challenge. While there is a majority agreement on its necessity, the absence of official recognition may undermine the legitimacy and effectiveness of the NP role. (Ljungbeck et al., 2023).

6.7 Economic-specific challenges

Within the economic-specific challenges, two papers highlighted economic constraints that confronted APNs which included low resource allocation and poor compensation package. The primary economic concern shared by all APNs is the challenging financial environment, which may affect the implementation of APN roles (Jokiniemi et al., 2015).

Strong leadership is essential for the NP role, particularly in overcoming resistance to resource allocation. Convincing policymakers and stakeholders in the healthcare workforce of the importance of the NP position, as well as securing adequate financial compensation packages for NPs is considered a challenge (Boman et al., 2019).

7 Discussion

This scoping review presents a thorough evaluation of the outcomes of the study on challenges to the advanced practice nurse role implementation. The study sought to identify the possible challenges to the implementation of the advanced practice nurse role in the Nordic context. The review findings identified challenges in the implementation of the APN role as highlighted in previous studies.

The team-specific challenges refer to issues that arise from the interaction among the healthcare professionals within the Nordic setting. APNs often encounter challenges in gaining acceptance within their professional teams primarily due to a lack of understanding of the APN roles and a lack of support from their professional team members. This scoping review found that advanced practice nurses transitioning into their new roles experienced rejection within the healthcare team. Although the exclusion was challenging, the positive feedback from their patients aided in the early adjustment to their role. The dedication of more time to their patients empowered the NPs and facilitated their transition processes (Jangland et al., 2016). Previous studies by Andregård & Jangland (2015) and Elliott et al. (2016) have emphasized the inadequate representation of APNs within healthcare settings. This study aligns with those findings, as having only a single advanced practice nurse on the healthcare team significantly limits their ability to implement their role. Many studies also reported that APNs felt lonely and uncomfortable, they were consistently alone among physicians, and it took a long time for the APNs to understand their role and scope of practice.

As mentioned in Andregård & Jangland's (2015) study, healthcare professionals perceived that the incoming APN may disorganize the already established structures within the team leading to conflicts between the experienced nurses and the new nurse practitioners. The less-experienced physicians were concerned about their roles with the presence of the NPs. These interprofessional conflicts were due to differences in training and perspectives on patient care. Challenges related to limited awareness of advanced practice nursing roles may lead to a lack of support (Jokiniemi et al., 2023) and resistance from other healthcare professionals. Physicians were not comfortable transferring tasks to the APNs (Boman et al., 2019). They doubted the skill level of the APNs and opposed the APNs' authority to prescribe medications, emphasizing the necessity of medical assessment and expressing concerns about nurses taking the prescribing responsibilities (Boman et al., 2019). A study by Henni et al. (2019), mentioned limited collaboration within the healthcare teams, with only a few colleagues occasionally

working with advanced practice nurses. Low frequency of collaboration is seen as a challenge to the seamless integration of NPs into the healthcare team and potentially affects the overall efficacy of the NP role. Similarly, Ljungbeck & Sjögren Forss (2017), highlighted the need for physicians to collaborate and supervise the APNs. They stressed that the uncertainty of the availability of physicians to accomplish the supervisory role can affect the integration of NPs into the healthcare system. It is important to note that the APN serves as a bridge between physicians and nurses. Following the clarification of the role there was a significant enhancement in team collaboration, and the APN role became clearer (Andregård & Jangland, 2015).

Previous studies have established that the majority of challenges to advanced practitioner role implementation are organizational challenges. This scoping review identified a consistent issue at different levels, primarily the lack of organizational support. Fatemi et al. (2020) and Elliott et al. (2016) demonstrated in their findings that inadequate organizational support for the APN role significantly impacts how APNs practice and how policy is shaped in the organization. According to Jangland et al. (2016), the role of advanced practice nurses was initially not accepted by the organizations. They also described the integration and acceptance of the new APN role as a lengthy process requiring the support of diverse groups in the organizational environment and workforce. The primary challenge identified by Elliott et al. (2016), study was the heavy and increasing clinical workload, which affects the time available for nurse practitioners to engage in leadership roles. Furthermore, they highlighted challenges in the organization which include a lack of role clarity and ambiguity regarding the scope of practice (Boman et al., 2022; Boman et al., 2019; Ljungbeck et al., 2023; Jokiniemi et al., 2015). Insufficient clarity in the APN role and scope of practice resulted in intra-team conflicts, and difficulties in collaboration (Henni et al., 2019).

APNs encounter challenges in influencing strategic decision-making primarily due to a perceived absence of authority and position within the organization (Elliott et al., 2016). Jokiniemi et al. (2015) in their findings discussed the perceived undesirability and uncertainty associated with the leadership component of the advanced practice nursing role. The leadership aspect was considered impossible and not part of the APN role as the experts believed it would consume too much time for the APN, interfering with the overall perception of their work. Clinical work other than medical specialty was seen as appropriate for the APN (Jokiniemi et al., 2015). Securing the advanced practice nursing role within the organization requires

comprehensive evidence-based practice and collaboration with key stakeholders to create a national policy (Jokiniemi et al., 2014).

The beginning of the journey into practising APN was challenging (Jokiniemi et al., 2023). According to the findings of Jangland et al. (2016), APNs take on dual roles which aligns with the results of this study where APNs assumed the responsibilities of a physician and a nurse simultaneously. They perceived themselves as experienced RNs and at the same time novice APNs. They lack the opportunity to improve their leadership skills through educational programs and they have limited time for their roles due to heavy workloads (Elliott et al., 2016). Some APNs lack the leadership traits of a nurse practitioner (Elliott et al., 2016). The APNs preferred being independent of the physicians while the physicians had contradicting views. The physicians believed that APNs should be supervised (Andregård & Jangland, 2015). APNs were also seen as a threat to other healthcare professionals' autonomy (Andregård & Jangland, 2015). These situations impose limitations on the implementation of advanced practice nursing roles. Recognizing the nurse practitioners' roles in different situations is important for decision-making on developing the role in the future and identifying support that is needed. This understanding enables nurse practitioners to effectively lead and drive new advancements in healthcare practice (Elliott et al., 2016).

Findings in healthcare, education, registration, and economic challenges indicate that resistance to change and lack of support are prevalent in these levels of challenges, which is consistent with previous studies. One of the key challenges is the lack of cooperation among healthcare professionals (Jangland et al., 2016), stakeholders perceive specialization for APNs as unimportant (Jokiniemi et al., 2015), stakeholders resist allocating decision-making responsibilities to APNs (Boman et al., 2019), and a lack of support to integrate APNs into established healthcare structures (Ljungbeck et al., 2023). Educational challenges include agreement on standardized educational programs and quality care assurance (Jokiniemi et al., 2015). Lack of support for registration and title protection was prominent in the regulatory issues (Jokiniemi et al., 2015), while poor resource allocation to facilitate the implementation of APN roles and low wages for advanced practice nurses were economic challenges (Boman et al., 2019). The challenges mentioned at these different levels contributed to making the incorporation of advanced practice nurses into the healthcare environment more complicated.

8 Methodological considerations

This research was conducted to identify the challenges to the advanced practice nursing role implementation in Nordic healthcare settings. The author is relatively new to scoping review research methodology, so there could be gaps in understanding and execution, potentially affecting the data collection and analysis process. The availability of relevant literature on this topic was limited which could have restricted a comprehensive understanding explored within the study. The research topic was relatively within the Nordic region which might have posed challenges in accessing relevant resources. Articles published in languages other than English-language were not considered in this study which means that valuable insights from research published in other languages are absent. This scoping review covered three out of five intended countries within the Nordic region namely, Finland, Norway, and Sweden leading to an incomplete representation of the topic within the region. All efforts to locate relevant research articles regarding this topic from Denmark and Iceland proved challenging hence the omission from this study. According to Peters et al. (2015), at least two reviewers are required to conduct a scoping review. The entire study was conducted by a single author. This means that the author's biases might have influenced the findings of the study. However, this review has laid the foundation for future research. A quality appraisal is not necessary for a scoping review and was not conducted (Arksey and O'Malley, 2005). Quality appraisal can limit conclusions on the strength of evidence in a study (Elliott et al., 2016).

9 Conclusion

To establish the advanced practice nursing role in Nordic healthcare services, it is important to have role clarity and description as well as a supportive structure. These descriptions should define the APN roles through the educational requirements, job titles, specialties, scope of practice, and potential practice areas within the healthcare institution. A well-defined job description is essential to guide the development, evaluation, and implementation of the APN roles. This scoping review aimed to identify the challenges to advanced practice nursing role implementation with a focus on Nordic healthcare settings. APNs in the Nordic countries are equipped with the necessary expertise to address complex health issues but lack organizational backing to progress. Other challenges that emerged were individual APN challenges, healthcare, educational, regulatory, and economic challenges. To ensure the successful integration of APNs into the Nordic healthcare setting, these challenges must be addressed. Resolving these challenges involves engaging various stakeholders in healthcare institutions. By reducing the challenges of implementing the advanced practice nurse roles the healthcare system can fully utilize APN competence leading to significant enhancement in patient care. Although this study has explored the various challenges to the implementation of the advanced practice role in Nordic healthcare settings, further qualitative study is needed to enhance the understanding of this issue. This can also help develop strategies to address these challenges and support the advancement of the APN role.

References

- Altersved, E., Zetterlund, L., Lindblad, U., & Fagerström, L.M. (2011). *Advanced practice nurses: A new resource for Swedish primary health-care teams. International Journal of Nursing Practice, 17*, 174-180. doi:10.1111/j.1440-172X.2011.01923.x
- Andregård, A. C., & Jangland, E. (2015). *The tortuous journey of introducing the nurse practitioner as a new member of the healthcare team: a meta-synthesis. Scandinavian journal of caring sciences, 29(1)*, 3–14. <https://doi.org/10.1111/scs.12120>
- Angelow, A. M. (2018). *The Lived Experience of Nurse Practitioner Role Transition: A Phenomenology Study (Order No. 10788544). Available from Social Science Premium Collection. (2107816117). <https://www.proquest.com/dissertations-theses/lived-experience-nurse-practitioner-role/docview/2107816117/se-2>*
- APRN Consensus Group Work Group & NCSBN APRN Advisory Committee. (2008). *Consensus Model for APRN regulation: Licensure, Accreditation, Certification, and Education. Available at: https://www.ncsbn.org/publicfiles/Consensus_Model_for_APRN_Regulation_July_2008.pdf*
- Arksey, H and O'Malley, L. (2005). *Scoping studies: towards a methodological framework. International Journal of Social Research Methodology. 8(1)*,19-32. ISSN 1364-5579 <https://doi.org/10.1080/1364557032000119616>
- Boman E, Gaarde K, Levy-Malmberg R, Wong FKY, Fagerström L. (2022). *Using the PEPPA framework to develop the nurse practitioner role in emergency care: Critical reflections. Nordic Journal of Nursing Research, 42(3)*, <https://doi.org/10.1177/2057158520988478>
- Boman, E., Glasberg, A. L., Levy-Malmberg, R., & Fagerström, L. (2019). *'Thinking outside the box': advanced geriatric nursing in primary health care in Scandinavia. BMC nursing, 18, 25. <https://doi.org/10.1186/s12912-019-0350-2>*

- Bryant-Lukosius, D., Spichiger, E., Martin, J., Stoll, H., Kellerhals, S. D., Fliedner, M., Grossmann, F., Henry, M., Herrmann, L., Koller, A., Schwendimann, R., Ulrich, A., Weibel, L., Callens, B., & De Geest, S. (2016). *Framework for Evaluating the Impact of Advanced Practice Nursing Roles*. *Journal of nursing scholarship: an official publication of Sigma Theta Tau International Honor Society of Nursing*, 48(2), 201–209. <https://doi.org/10.1111/jnu.12199>
- Canadian Nurses Association, (2022). Retrieved December 3, 2022. <https://www.cna-aiic.ca/en/nursing/advanced-nursing-practice/nurse-practitioners>
- Colorafi, K. J., & Evans, B. (2016). *Qualitative Descriptive Methods in Health Science Research*. *HERD*, 9(4), 16–25. <https://doi.org/10.1177/1937586715614171>
- Elliott, N., Begley, C., Sheaf, G., & Higgins, A. (2016). *Barriers and enablers to advanced practitioners' ability to enact their leadership role: A scoping review*. *International journal of nursing studies*, 60, 24–45. <https://doi.org/10.1016/j.ijnurstu.2016.03.001>
- Fagerström, L. M. (2021). *A caring advanced practice nursing model: Theoretical perspectives and competency domains*. Springer International Publishing AG.
- Fagerström, L., & Glasberg, A. L. (2011). *The first evaluation of the advanced practice role in Finland - the perspective of nurse leaders*. *Journal of nursing management*, 19(7), 925–932. <https://doi.org/10.1111/j.1365-2834.2011.01280.x>
- Fatemi M., Benjamin K., Johnson J., O'Dwyer R., (2020). *Barriers to the Implementation of the Advanced Practice Nursing Role in Primary Health Care Settings: An Integrative Review*. *Middle East Journal of Nursing* 14(2), 16-37
<https://doi.org/10.5742/MEJN2020.93794>
- Finlex, (2014, December 20)
https://finlex.fi/en/laki/kaannokset/2014/en20140932_20200000.pdf
- Finnish Nurses Association (2016). *New roles for nurses – quality to future social welfare and health care services*. Retrieved November 12, 2022. <https://sairaanhoitajat.fi/wp-content/uploads/2020/01/new-roles-for-nurses.pdf>

- Gysin, S., Sottas, B., Odermatt, M., & Essig, S. (2019). *Advanced practice nurses' and general practitioners' first experiences with introducing the advanced practice nurse role to Swiss primary care: a qualitative study*. *BMC family practice*, 20(1), 163. <https://doi.org/10.1186/s12875-019-1055z>
- Hankins, A., Palokas, M., & Christian, R. (2020). *Advanced practice nurse professional advancement programs: a scoping review protocol*. *JBI evidence synthesis*, 18(1), 108–114. <https://doi.org/10.11124/JBISRIR-D-19-00020>
- Hansen, EH, Boman E, Fagerström L. (2021). *Perception of the implementation of the nurse practitioner role in a Norwegian out-of-hours primary clinic: An email survey among healthcare professionals and patients*. *Nordic Journal of Nursing Research*. 41(1):54-60. doi:10.1177/2057158520964633
- Hansen, EH., Bomann, E., Bing-Jonsson, P., & Fagerstrom, L. M. (2020). *Introducing Nurse Practitioners Into Norwegian Primary Healthcare-Experiences and Learning*. *Research and theory for nursing practice*, 34(1), 21–34. <https://doi.org/10.1891/1541-6577.34.1.21>
- Henni, S. H., Kirkevold, M., Antypas, K., & Foss, C. (2018). *The role of advanced geriatric nurses in Norway: A descriptive exploratory study*. *International journal of older people nursing*, 13(3), e12188. <https://doi.org/10.1111/opn.12188>
- Henni, S. H., Kirkevold, M., Antypas, K., & Foss, C. (2019). *The integration of new nurse practitioners into care of older adults: A survey study*. *Journal of clinical nursing*, 28(15-16), 2911–2923. <https://doi.org/10.1111/jocn.14889>
- International Advanced Practice Nursing, (2013, December 3). <https://internationalapn.org/category/europe/sweden/>
- International Advanced Practice Nursing, (2013, December 3). <https://internationalapn.org/category/north-america/united-states/>
- International Advanced Practice Nursing, (2013, December 3). <https://internationalapn.org/category/north-america/canada/>
- International Council of Nurses, (2020, November 13). Guidelines on Advanced Practice Nursing https://www.icn.ch/system/files/documents/202004/ICN_APN%20Report_EN_WEB.pdf

- Jangland, E., Becker, D., Börjesson, S., Doherty, C.L., Gimm, O., Griffith, P., Johansson, A.K., Juhlin, C.C., Pawlow, P.C., Sicoutris, C.P., & Yngman-Uhlin, P. (2013). *The development of a Swedish Nurse Practitioner Program - a request from clinicians and a process supported by US experience. Journal of Nursing Education and Practice, 4*, 38-48. <http://dx.doi.org/10.5430/jnep.v4n2p38>
- Jangland, E., Yngman Uhlin, P., & Arakelian, E. (2016). *Between two roles - Experiences of newly trained nurse practitioners in surgical care in Sweden: A qualitative study using repeated interviews. Nurse education in practice, 21*, 93–99. <https://doi.org/10.1016/j.nepr.2016.10.005>
- Jokiniemi, K., Haatainen, K., & Pietilä, A. M. (2015). *From challenges to advanced practice registered nursing role development: Qualitative interview study. International journal of nursing practice, 21(6)*, 896–903. <https://doi.org/10.1111/ijn.12334>
- Jokiniemi, K., Haatainen, K., Meretoja, R., & Pietilä, A. M. (2015). *The future of the clinical nurse specialist role in Finland. Journal of nursing scholarship : an official publication of Sigma Theta Tau International Honor Society of Nursing, 47(1)*, 78–86. <https://doi.org/10.1111/jnu.12109>
- Jokiniemi, K., Haatainen, K., Meretoja, R., & Pietilä, A-M. (2014). *Original Paper Advanced Practice Nursing Roles: The Phases of the Successful Role Implementation Process. International Journal of Caring Sciences. 7(3)*, 946-954.
- Jokiniemi, K., Kärkkäinen, A., Korhonen, K., Pekkarinen, T., & Pietilä, A. M. (2023). *Outcomes and challenges of successful clinical nurse specialist role implementation: Participatory action research. Nursing open, 10(2)*, 704–713. <https://doi.org/10.1002/nop2.1336>
- Jokiniemi, K., Suutarla, A., Meretoja, R., Kotila, J., Axelin, A., Flinkman, M., Heikkinen, K., & Fagerström, L. (2020). *Evidence-informed policymaking: Modelling nurses' career pathway from registered nurse to advanced practice nurse. International journal of nursing practice, 26(1)*, e12777. <https://doi.org/10.1111/ijn.12777>
- Josi, R., Bianchi, M., & Brandt, S. K. (2020). *Advanced practice nurses in primary care in Switzerland: an analysis of interprofessional collaboration. BMC nursing, 19, 1*. <https://doi.org/10.1186/s12912-019-0393-4>

Jyväskylä University of Applied Sciences, (2024, May 14)

<https://opetusuunnitelmat.peppi.jamk.fi/en/4852/en/135431>

Kilpatrick, K., Kaasalainen, S., Donald, F., Reid, K., Carter, N., Bryant-Lukosius, D., MartinMisener, R., Harbman, P., Marshall, D. A., Charbonneau-Smith, R., & DiCenso, A. (2014). *The effectiveness and cost-effectiveness of clinical nurse specialists in outpatient roles: a systematic review. Journal of evaluation in clinical practice, 20(6), 1106–1123.* <https://doi.org/10.1111/jep.12219>

Kilpatrick, K., Savard, I., Audet, L. A., Kra-Friedman, A., Atallah, R., Jabbour, M., Zhou, W., Wheeler, K., Ladd, E., Gray, D. C., Henderson, C., Spies, L. A., McGrath, H., & Rogers, M. (2023). *A global perspective of advanced practice nursing research: A review of systematic reviews protocol. PloS one, 18(1), e0280726.* <https://doi.org/10.1371/journal.pone.0280726>

Levac, D., Colquhoun, H., & O'Brien, K. K. (2010). *Scoping studies: advancing the methodology. Implementation science. 20(5), 69.* <https://doi.org/10.1186/1748-5908-5-6>

Lindblad, E., Hallman, E. B., Gillsjö, C., Lindblad, U., & Fagerström, L. (2010). *Experiences of the new role of advanced practice nurses in Swedish primary health care--a qualitative study. International journal of nursing practice, 16(1), 69–74.* <https://doi.org/10.1111/j.1440-172X.2009.01810.x>

Ljungbeck, B., & Sjögren Forss, K. (2017). *Advanced nurse practitioners in municipal healthcare as a way to meet the growing healthcare needs of the frail elderly: a qualitative interview study with managers, doctors and specialist nurses. BMC nursing, 16, 63.* <https://doi.org/10.1186/s12912-017-0258-7>

Ljungbeck, B., Sjögren-Forss, K., & Carlson, E. (2023). *Nurse practitioner in Swedish municipal elderly care: A Delphi study of challenges and opportunities. Scandinavian journal of caring sciences, 37(1), 216–228.* <https://doi.org/10.1111/scs.13116>

Miranda Neto, M. V., Rewa, T., Leonello, V. M., & Oliveira, M. (2018). *Advanced practice nursing: a possibility for Primary Health Care?. Revista brasileira de enfermagem, 71(suppl 1), 716–721.* <https://doi.org/10.1590/0034-7167-2017-0672>

- Nieminen, A. L., Mannevaara, B., & Fagerström, L. (2011). *Advanced practice nurses' scope of practice: a qualitative study of advanced clinical competencies. Scandinavian journal of caring sciences, 25(4), 661–670.* <https://doi.org/10.1111/j.1471-6712.2011.00876.x>
- Nigenda, G., Lee, G., Aristizabal, P., Walters, G., & Zárata-Grajales, R. A. (2021). *Progress and challenges for advanced practice nursing in Mexico and the United Kingdom. Journal of Nursing Management, 29(8), 2461–2469.* <https://doi.org/10.1111/jonm.13413>
- Peters, M. D., Godfrey, C. M., Khalil, H., McInerney, P., Parker, D., & Soares, C. B. (2015a). *Guidance for conducting systematic scoping reviews. International journal of evidence-based healthcare, 13(3), 141–146.* <https://doi.org/10.1097/XEB.0000000000000005>
- Peters, M., Godfrey, C., McInerney, P., Soares, C., Khalil, H., Parker, D. (2015b). *Methodology for JBI Scoping Reviews. Available at: https://www.researchgate.net/publication/294736492_Methodology_for_JBI_Scoping_Reviews*
- Peters, M., Marnie, C., Colquhoun, H., Garritty, C. M., Hempel, S., Horsley, T., Langlois, E. V., Lillie, E., O'Brien, K. K., Tunçalp, Ö., Wilson, M. G., Zarin, W., & Tricco, A. C. (2021). *Scoping reviews: reinforcing and advancing the methodology and application. Systematic reviews, 10(1), 263.* <https://doi.org/10.1186/s13643-021-01821-3>
- Peters, M., Marnie, C., Tricco, A. C., Pollock, D., Munn, Z., Alexander, L., McInerney, P., Godfrey, C. M., & Khalil, H. (2020). *Updated methodological guidance for the conduct of scoping reviews. JBI evidence synthesis, 18(10), 2119–2126.* <https://doi.org/10.11124/JBIES-20-00167>
- Rafferty, A. M., Busse, R., Zander-Jentsch, B., Sermeus, W., & Bruyneel, L. (Eds.). (2019). *Strengthening health systems through nursing: Evidence from 14 European countries. European Observatory on Health Systems and Policies. Available at: https://www.ncbi.nlm.nih.gov/books/NBK545713/*

- Schönenberger, N., Sottas, B., Merlo, C., Essig, S., & Gysin, S. (2020). *Patients' experiences with the advanced practice nurse role in Swiss family practices: a qualitative study*. *BMC nursing*, 19, 90. <https://doi.org/10.1186/s12912-020-00482-2>
- Study info Finland, (2022 May 14)
<https://opintopolku.fi/konfo/en/koulutus/1.2.246.562.13.00000000000000000994>
- Study info Finland, (2022 May 14).
<https://opintopolku.fi/konfo/en/haku/arcada?order=desc&size=20&sort=score>
- Taylor, F., Drennan, V. M., Halter, M., Allan, H. T., & Collins, L. (2022). *Uptake of advanced clinical practice roles in the health service in England: Perspectives at the micro level*. *SSM – Qualitative Research in Health*, 2, 100141.
<https://doi.org/10.1016/j.ssmqr.2022.100141>
- Tetrault A, Nyback M-H, Vaartio-Rajalin H, Fagerström L. (2021). *Advance Care Planning interventions for older people with early-stage dementia: A scoping review*. *Nordic Journal of Nursing Research*. 42(2):76-84. doi:10.1177/20571585211014005
- University of Leeds Library, (2022, December 23).
https://library.leeds.ac.uk/info/1110/resource_guides/7/grey_literature/2
- Unsworth, J., Greene, K., Ali, P., Lillebø, G., & Mazilu, D. C. (2022). *Advanced practice nurse roles in Europe: Implementation challenges, progress and lessons learnt*. *International nursing review*, 10.1111/inr.12800. Advance online publication.
<https://doi.org/10.1111/inr.12800>
- Wheeler, K. J., Miller, M., Pulcini, J., Gray, D., Ladd, E., & Rayens, M. K. (2022). *Advanced Practice Nursing Roles, Regulation, Education, and Practice: A Global Study*. *Annals of global health*, 88(1), 42. <https://doi.org/10.5334/aogh.3698>
- Wisur-Hokkanen, C., Glasberg, A. L., Mäkelä, C., & Fagerström, L. (2015). *Experiences of working as an advanced practice nurse in Finland--the substance of advanced nursing practice and promoting and inhibiting factors*. *Scandinavian journal of caring sciences*, 29(4), 793–802. <https://doi.org/10.1111/scs.12211>
- Åbo Akademi University, (2020). *Instruction on Ethics and the Responsible Conduct of Research*. Available at: <https://www.abo.fi/wp-content/uploads/2021/10/Instruction-on-Ethics-and-the-Responsible-Conduct-of-Research.pdf>

Åbo Akademi University, (2020, May 14). <https://www.abo.fi/en/study/apply/international-master-programmes/academic-requirements/admission-to-masters-degree-programme-in-advanced-practice-nursing/>

Åbo Akademi University, (2024, May 14) <https://www.abo.fi/en/study-programme/masters-degree-programme-in-advanced-practice-nursing/>