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Krista Jokiniemi

Clinical Nurse Specialist Role in Finnish Health Care

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Finnish Health Care

KRISTA JOKINIEMI

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ABSTRACT:

Advanced practice nursing (APN) is a global megatrend. Around the world countries are introducing APN roles as a strategy for improving the quality and accessibility of health care services and containing or reducing health care costs. APN refers to nursing beyond the level of front-line nursing and requires a minimum education at master's level. APN roles include several different types of roles such as the clinical nurse specialist (CNS). Within Finnish health care these roles are new, and no national guidelines exist to steer the role development or implementation.

The aim of this study was to describe the international and Finnish APN roles through one of its roles, CNS, and to explore the implications for future development of this role. The ultimate goal was to develop a framework informing sectors concerned of CNS roles to assist national conceptualization, standardization and consistent role development. The study consists of three sub-studies: a systematic literature review (n=42), semi-structured individual clinical nurse specialist interviews (n=11), and a policy Delphi study with expert panelists (first round n=25, second round n=22, third round n=19). These data were analyzed using both qualitative and quantitative methods and were integrated using a narrative synthesis method.

APN roles were featured as multifaceted contemporary nursing roles. The study revealed that the Finnish CNS role is generally consistent with the similarly named international role. Central focus of practice for CNSs is advanced clinical nursing; CNSs are experienced, independent practitioners whose role includes advanced responsibilities, specialization and expanded practice. They operate in the four distinctive yet interrelated role spheres of patient, nursing, organization, and scholarship. Successfully implementing CNS roles in practice settings is a complex process; several internal and external contributors affect their role achievement and implementation. All these elements are elaborated in the clinical nurse specialist role conceptualization, implementation, and evaluation framework presented in this study. Additionally, preliminary descriptions of Finnish CNS core competencies were provided.

The proposed framework may assist in the consistent development, implementation and evaluation of APN roles in Finland. Consensus on role attributes will help policy makers define roles and competencies, enable educators to develop curricula, and the public to understand the advanced practice nurse role. Well-designed, carefully implemented and evaluated roles will eventually evolve and yield profits, thereby benefiting patients, health care personnel, organizations and the community at large.

National Library of Medicine Classification: Medical Subject Headings: Advanced Practice Nursing; Nurse Clinicians; Job Description; Nurse's Role; Nurse's Practice Patterns; Qualitative Research

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TIIVISTELMÄ:

Hoitotyön asiantuntijatehtävät ovat nykypäivän globaali megatrendi. Asiantuntijatehtävien tavoitteena on vastata terveydenhuollon vaateisiin parantamalla palvelujen laatua ja saatavuutta pienemmillä kustannuksilla. Hoitotyön asiantuntijatehtävistä yksi esimerkki on kliinisen hoitotyön asiantuntija. Kliinisen hoitotyön asiantuntijat toimivat laaja-alaisemmissa työtehtävissä kuin sairaanhoitajat ja heillä on terveystieteiden maisterin tutkinto. Suomalaisessa terveydenhuollossa tehtävät ovat uusia eikä tehtävien vähimmäisvaatimuksia tai toimeenpanoa koskevia ohjeistuksia ole kansallisella tasolla määritelty.

Tämän tutkimuksen tarkoituksena on kuvata kliinisen hoitotyön asiantuntijatehtävää kansainvälisestä ja kansallisesta näkökulmasta sekä visioida tehtävän tulevaisuuden näkymiä. Tavoitteena on muodostaa tutkimustuloksien pohjalta synteesi, kansallisen tehtävän määrittelyn, standardoinnin sekä yhteneväisen kehittämistyön pohjaksi. Tutkimuskokonaisuus koostuu kolmesta osatutkimuksesta: systemaattisesta kirjallisuus-katsauksesta (n=42), kliinisen hoitotyön asiantuntijoiden teemahaastatteluista (n=11) ja Delphi tutkimuksesta (ensimmäinen kierros n=25, toinen n=22 ja kolmas n=19). Aineistot analysoitiin sekä laadullisin että määrällisin menetelmin ja tulokset integroitiin narratiivisen synteesin keinoin.

Hoitotyön asiantuntijatehtäviä kuvattiin monitahoisina ja ajankohtaisina sekä kansainvälisesti että kansallisesti. Tämä tutkimus osoitti, että suomalainen kliinisen hoitotyön asiantuntijan tehtävä on pääsääntöisesti yhteneväinen kansainvälisen tehtävänkuvan kanssa. Työn keskeinen fokus on asiantuntijatasoinen kliininen hoitotyö. Kliinisen hoitotyön asiantuntijat ovat kokeneita, itsenäisiä työntekijöitä, joiden työ sisältää erikoistumiseen ja laajennettuihin tehtävänkuviin ja vastuualueisiin liittyviä tehtäviä. Työ toteutuu potilas- ja hoitotyön sekä organisaatio- ja tiedeperustaisen työn osa-alueilla. Kliinisen hoitotyön asiantuntijatehtävien käytäntöön vieminen on moniulotteinen prosessi. Tutkimustuloksien synteesinä tuotettu kliinisen hoitotyön asiantuntijatehtävän määrittelyn, implementoinnin ja arvioinnin kehys hahmottaa tehtävänkuvan ominaispiirteitä sekä toteutuksen perusteita. Lisäksi tutkimuksessa tuotettiin kliinisen hoitotyön asiantuntijan alustavat kompetenssikuvaukset.

Kansallisesti sovitut hoitotyön asiantuntijuuden määritelmät ja toimintaperiaatteet mahdollistavat yhteneväisten tehtävänkuvien kehittämisen tulevaisuudessa. Hyvin suunnitellut, huolella toteutetut ja arvioidut hoitotyön asiantuntijatehtävät kehittyvät ajan myötä hyödyttäen lopulta potilasta, hoitotyötä, organisaatiota ja koko yhteiskuntaa.

Yleinen Suomalainen asiasanasto: sairaanhoitajat; hoitotyö; kliininen hoitotiede; työnkuva; asiantuntijuus; kvalitatiivinen tutkimus

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LaMata, 1.10.2014

Krista Jokiniemi

List of the original publications

This dissertation is based on the following original publications:

I Jokiniemi, K., Pietilä, A-M., Kylmä, J., Haatainen, K. 2012. Advanced Nursing Roles: A systematic Review. Nursing and Health Sciences 14, 421-431.

II Jokiniemi, K., Haatainen, K., Pietilä, A-M. 2014. From Challenges to Advanced Practice Registered Nursing Role Development: Qualitative Interview Study. International Journal of Nursing Practice. doi:10.1111/ijn.12334.

III Jokiniemi, K., Haatainen, K., Meretoja, R., Pietilä A-M. 2014. The Future of Clinical Nurse Specialist Role in Finland. Journal of Nursing Scholarship. doi:10.1111/jnu.12109. In press.

IV Jokiniemi, K., Meretoja, R., Haatainen, K., Pietilä, A-M. 2014. Advanced Practice Nursing Roles: The Phases of the Successful Role Implementation Process. International Journal of Caring Sciences 7, 946-954.

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APPENDIX I: Definition of central concepts

APPENDIX II: The preliminary clinical nurse specialist competency descriptions

APPENDIX III: Suggestions on clinical nurse specialist role measurement methods

Abbreviations

APN	Advanced practice nursing
APRN	Advanced practice registered nurse
CINAHL	Cumulative Index to Nursing and Allied Health Literature
CNS	Clinical nurse specialist
ECTS	European Credit Transfer and Accumulation System
EBP	Evidence based practice
MSAH	Ministry of Social Affairs and Health (in Finland)
MSc	Master Degree, Master of Science
NC	Nurse consultant
NM	Nurse midwife
CNC	Clinical nurse consultant
ICN	International Council of Nursing
PUB-MED	U.S. National Library of Medicine
SPSS	Statistical Package for the Social Sciences
USA	United States of America
Valvira	National Supervisory Authority for Welfare and Health (in Finland)

1 Introduction

Increased societal, economic, health care, and information technology demands have generated a need for nursing to strengthen the quality and safety of practice and re-examine its clinical roles. In order to respond to various health care challenges and increased requirements advanced practice nursing (APN) roles have evolved over the years in many countries. The roots of APN go way back in time, although the term APN first appeared in the international nursing literature only in the 1980s (Sheer & Wong 2008, Ruel & Motyka 2009); and in recent years these roles and their development have become a global trend (Sheer & Wong 2008, Ruel & Motyka 2009, Pulcini et al. 2010, Delamaire & Lafortune 2010). APN is often used in the literature as an all-encompassing umbrella term referring to nursing beyond the level of front-line nursing with education at master's level or beyond (Davies & Hughes 2002, Bryant-Lukosius & DiCenso 2004, Sheer & Wong 2008, American Nurses Association 2010, Delamaire & Lafortune 2010). There are different types of APN roles in various countries such as clinical nurse specialist (CNS), nurse practitioner (NP), nurse consultant (NC), and nurse midwife (NM) (Manley 1997, Ketefian et al. 2001, Hanson & Hamric 2003, Sheer & Wong 2008, Ruel & Motyka 2009, Dowling et al. 2013); however, there is considerable variation with regards to these roles between and even within countries.

Evidence supporting the positive benefits and outcomes of APN roles is gradually building (Sheer & Wong 2008, Newhouse et al. 2011, Brooten et al. 2012). Due to holistic evidence based approaches to patient care (Arslanian-Engoren et al. 2005) these practitioners are invaluable assets to health care, having an outstanding opportunity to bring organizations the means to produce effective, accessible care with decreased cost and increase the magnetism of health care services (Ketefian et al. 2001, Delamaire & Lafortune 2010). Although in some parts of the world these powerful APN roles have existed since the middle of the 20th century, global awakening in their development emerged around the turn of the century (Sheer & Wong 2008) at which time Nordic countries also began role implementation (Fagerström 2009, Altersved et al. 2011, Oddsdóttir & Sveinsdóttir 2011). The increasing interest in the APN role development throughout the world has highlighted the importance for nurses and the nursing profession to understand the language and concepts involved in order to communicate with each other, clients, and stakeholders (Spross & Lawson 2013). The overriding feature of international literature on APN, however, reveals its diversity (Bryant-Lukosius et al. 2004, Daly & Carnwell 2003, Dowling et al. 2013). A lack of standardized mechanisms to identify those who qualify as advanced practice nurses and the absence of national processes to track these roles, may furthermore hinder the accurate understanding, assessment and integration as well as monitoring of these roles by health systems (Bryant-Lukosius et al. 2010).

Within Finnish health care too, advanced practice nurses' role development is increasingly becoming a focus of attention. The requirements for patient safety, accessibility of care, and the need to renew the division of labor, as well as regulation, brings demands to increase nursing competence, thus develop APN roles and education (Hukkanen & Vallimies-Patomäki 2005, MSAH 2009b, MSAH 2012). The concept of advanced nursing appeared for the first time in the Finnish nursing literature in the 1980s (Merasto 2011) but the first advanced practice nurse, the CNS, emerged only at the beginning of the 21st century in university specialist health care settings (Meretoja & Vuorinen 2000, Meretoja et al. 2002). Today people are generally unaware of APN roles and the lack of clarity about role and scope of practice has been observed (Fagerström 2009). Furthermore, there are no uniform national education programs, legislative and regulatory mechanisms or protected titles in place in Finland for advanced nursing roles (Hukkanen & Vallimies-Patomäki 2005), to

support the role development and implementation. It is therefore evident that national frameworks are needed to shape and integrate advanced practice nurses' role descriptions, inform practice agreements and policy development, guide the development of curricula, and provide direction for research agendas. Confusion regarding APN roles internationally and nationally, and the absence of national policies and regulation, emphasize the need to examine and study these nursing roles which are of contemporary interest. However, to successfully implement APN roles into practice settings is a complex process influenced by numerous factors (Bryant-Lukosius & DiCenso 2004, Sangster-Gormley et al. 2011). Additionally there is scarce evidence on successful APN implementation processes (Sangster-Gormley, Martin-Misener & Burge 2013).

This dissertation explores the many facets of the multidimensional phenomenon of CNS. Through presenting the results of three original studies, it distinguishes and describes the CNS role within the international and national contexts and explores the vision for their future development within the Finnish health care environment. Additionally, an effort is made to unify the national CNS role conceptualization and standardization by synthesizing and building on the findings of the original studies. Although, these practitioners may operate in primary or specialist health care, the focus in this study is specialist health care. In this study CNS signifies experienced registered nurses who have attained a minimum of master’s level education and whose scope of practice include internationally recognized advanced practice nurse functions such as advanced clinical practice, education, consultation, leadership, and research.

2 *Review of the literature*

2.1 ADVANCED PRACTICE NURSING DELINEATION

2.1.1 Advanced practice nurse generic definition and nomenclature

Defining the advanced practice nurse as a distinguished nursing role is an ambitious task but a necessary step for establishing the foundation for future role development. Advanced practice nursing (APN) as a concept emerged for the first time in the 1980s but practice patterns were already visible in the early 20th, century (Ketefian et al. 2001), with the USA having the longest history of APN roles dating back to the 1950s. APN is an umbrella term referring to nursing at a higher level than front-line nursing (Davies & Hughes 2002, Bryant-Lukosius et al. 2004, Sheer & Wong 2008). It includes various types of roles such as the clinical nurse specialist (CNS), nurse practitioner (NP), nurse consultant (NC), and nurse midwife (NM) (Manley 1997, Ketefian et al. 2001, Hanson & Hamric 2003, Ruel & Motyka 2009). Currently there is considerable variation and confusion with regard to the advanced practice nurses' role nomenclature. In 2010 the international study conducted by Pulcini et al. found 13 different titles related to APN. Many of these titles are being adopted in a variety of countries with little understanding or consensus as to the nature of, or differences between these roles (Daly & Carnwell 2003). Confusion abounds between and even within countries regarding the meaning, scope of practice, preparation for, and expectation of these roles (Daly & Carnwell 2003, Bryant-Lukosius et al. 2004, Lewandowski & Adamle 2009, Patten & Goudreau 2012, Dowling et al. 2013).

Despite APN roles' fairly long roots and wide-ranging existence, it is difficult to find a clear, unified general definition of the term advanced practice nurse (Davies & Hughes 2002, Delamaire & Lafortune 2010). The predominant ambiguity and disparity of the advanced practice nurse role delineation may also be seen in Table 1 displaying several definitions found from the literature. In response to the conceptual debate, and in order to facilitate a common understanding of advanced nursing roles, the ICN (2014) has developed a definition which defines the advanced practice nurse as "a registered nurse who has acquired the expert knowledge base, complex decision-making skills, and clinical competencies for expanded practice. A master's degree is recommended for entry level." Current national advanced practice nurse definitions are generally consistent with this broad definition, although adapted to national contexts (Delamaire & Lafortune, 2010).

In the literature several APN terms and titles are used inconsistently and interchangeably leaving the health care professions and society perplexed (Daly & Carnwell 2003, Hanson & Hamric 2003, Dowling et al. 2013). The term APN is frequently interchanged with advanced nursing practice and lacks consistency of use with some countries or institutions preferring one instead of the other (Brown 1998, Bryant-Lukosius et al. 2004, Spross & Lawson 2013). It has been put forward that APN refers to the whole field of nursing and encompasses features such as environments, society, resources, structures, discipline, and profession, as well as advanced nursing practice. Advanced nursing practice in turn describes what nurses do in their role (Bryant-Lukosius et al. 2004). Additionally there is a lack of rigor in the distinction between APN as a profession and advanced practice nurse as a practitioner, with the abbreviation APN used simultaneously for both.

Table 1. Examples of generic advanced practice nursing definitions

Author(s)	Advance practice nursing definition
Davies & Hughes (2002)	"The term advanced nursing practice extends beyond roles. It is a way of thinking and viewing the world based on clinical knowledge, rather than a composition of roles. Advanced nursing practice, therefore, is professional activity that moves forward the nursing care provided to society."
Hamric 2000 in Hanson & Hamric (2003)	Advanced nursing practice is the application of an expanded range of practical, theoretical, and research-based therapeutics to phenomena experienced by patients within a specialized clinical area of the larger discipline of nursing. The primary criteria of graduate education, national certification and patient-centered practice are necessary. A critical definitional feature of advanced practice is the central competency of direct clinical practice, thus the provision of direct practice separates advanced practice nurses from some other expanded nursing roles. Six additional core competencies that further define advanced practice nursing include expert guidance and coaching, consultation, ethical decision making, collaboration, research skills, and clinical and professional leadership.
ICN (2014)	"Advanced practice nurse is a registered nurse who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and/or country in which s/he is credentialed to practice. A master's degree is recommended for entry level."
Bryant-Lukosius et. al. (2004)	Advanced nursing practice refers to the work or what nurses do in the role. The concept of advancement further defines the multi-dimensional scope and mandate of advanced nursing practice and distinguishes differences from other types of nursing roles. Acquisition of specialty or expanded clinical knowledge and kills is not indicative of advanced practice unless clinical practice directs and is guided by the knowledge and activities of other role domains to improve patient care. Advanced practice nursing refers to the whole field of a specific type of nursing practice.
Furlong & Smith (2005)	The core concepts for the advanced nursing practice role are: autonomy in clinical practice, pioneering professional and clinical leadership, expert practitioner and researcher. To achieve these core concepts the advanced nurse practitioner must develop advanced theoretical and clinical skills, meet the needs of the client, family and the community.
Canadian Nurses Association (2008)	"Advanced nursing practice is an umbrella term describing an advanced level of clinical nursing practice that maximizes the use of graduate educational preparation, in-depth nursing knowledge and expertise in meeting the health needs of individuals, families, groups, communities and populations. It involves analyzing and synthesizing knowledge; understanding, interpreting and applying nursing theory and research; and developing and advancing nursing knowledge and the profession as a whole."
Mosby's Medical dictionary (2009)	"A registered nurse having education beyond the basic nursing education and certified by a nationally recognized professional organization in a nursing specialty, or meeting other criteria established by a Board of Nursing. The Board of Nursing establishes rules specifying which professional nursing organization certifications can be recognized for advanced practice nurses and sets requirements of education, training, and experience. Designations recognized as advanced practice nursing include certified nurse-midwife, certified registered nurse anesthetist, clinical nurse specialist, and nurse practitioner."
American Nurses Association (2010)	"Advanced practice registered nurse is a nurse who has completed an accredited graduate-level education program preparing her or him for the role of certified nurse practitioner, certified registered nurse anesthetist, certified nurse-midwife, or clinical nurse specialist; has passed a national certification examination that measures the APRN role and population-focused competencies; maintains continued competence as evidenced by recertification; and is licensed to practice as an APRN."

APRN = Advanced practice registered nurse
ICN = International Council of Nursing

Furthermore, recent definitions from the International Council of Nurses (ICN) and the United States (US) emphasize that advanced practice nurses are registered (American Nurses Association 2010, ICN 2014); hence, an advanced practice registered nurse (APRN) is a new addition to an already confusing list of international APN role titles. The use of APRN may aid in distinguishing the terms advanced practice nurse and advanced practice nursing. However, the term APRN has not been adopted by countries outside of the United States.

The term advanced practice nursing (APN) will be used in this study to refer to nursing as a profession and practice. Furthermore, this study focuses on one type of APN role: the CNS.

2.1.2 Core advanced practice nursing concepts and scope of practice

APN is an abstract construction of concepts (Hanson & Hamric 2003, Daly & Carnwell 2003); central or core concepts are elaborated in Appendix 1. Although the most important word in the APN term is nursing, there is a general consensus that it is beyond front-line clinical nursing practice (Ketefian et al. 2001, Ruel & Motyka 2009). The characteristics distinguishing APN from front-line nursing are advancement, specialization, expansion (Bryant-Lukosius et al. 2004, Ruel & Motyka 2009), and autonomy (Ketefian et al. 2001, Furlong & Smith 2005, Mantzoukas & Watkinson 2007). While these are important elements it is important to distinguish and integrate these as parts of the whole rather than independent entities.

While specialties in nursing have existed since the early 1900s, and APN was initially associated with nursing specialization (Ketefian et al. 2001, Hanson & Hamric 2003) specialization is different from APN. Furthermore every specialty in nursing is not necessarily APN which is evident when considering the nurse educators, nurse administrators, or expert clinician roles (Hanson & Hamric 2003). The other characteristic, role expansion, implies that the core elements of nursing practice apply but that additional skills and areas of practice, such as prescribing rights and diagnosing, are encompassed within the role, which involves greater responsibility, accountability and autonomy (Daly & Carnwell 2003). While specialization and role expansion may be APN elements they should never be the sole indicators, but must be accompanied by other distinguished role domains and competencies of APN (Bryant-Lukosius et al. 2004, Mantzoukas & Watkinson 2007). Nevertheless the role specialization or expansion has been noted to indicate the advanced practice nurses' with their secondary title such as CNS or NP (Sheer & Wong 2008); for example, the CNS has been seen as the essence of advanced nursing specialty, and NPs often expand into other disciplines, primarily medicine (Fulton 2002).

APN is seen as a heterogeneous set of multiple roles and competencies with blurred boundaries (Ketefian et al. 2001, Bryant-Lukosius et al. 2004), yet, it should always extend beyond roles and competencies, thus it is a way of thinking and viewing the world based on clinical knowledge, rather than a composition of roles (Davies & Hughes, 2002). Advanced practice nurses' competencies are enacted in practice within the particular chosen specialty. The areas of specialization may be based on population (e.g., pediatric), type of problem (e.g., surgical), setting (e.g., inpatient), type of care (e.g., critical care), or medical specialty (e.g., cardiac) (NACNS 2004, American Nurses Association 2010). In addition the APN role actualizes through the activities of advanced clinical practice, practice development, education, consultation, research, and leadership (Hanson & Hamric 2003, Bryant-Lukosius & DiCenso 2004, Dowling et al. 2013). The holistic approach to the delivery of patient care

and unique contribution of nursing's ways of knowing where APNs include the integration of the family, the environment, and the human response to health and illness in the provision of care, distinguishes them from other health care providers (Arslanian-Engoren et al. 2005). A focal feature separating advanced practice nurses from some other expanded nursing roles is the provision of direct clinical practice (Hanson & Hamric 2003).

Variation also emerges when examining the several APN conceptualizations and frameworks. As there are several conceptualizations and inconsistency in terminology the challenge is to find a model that works for individual advanced practice nurse or organization. Whichever model used: conceptual, operational, or practical, it should enable the practitioner and their organization to understand and evaluate their practice and also attend to the profession's efforts to create a coherent conceptualization of APN. (Spross & Lawson 2013.) Through arranging APN concepts within a framework, a profile to structure the main features and processes of a phenomenon may be proposed (Brown 1998).

2.2 THE EMERGENCE OF ADVANCED PRACTICE NURSING ROLES

2.2.1 The evolution from nursing to advanced practice nursing

Historically APN may be regarded as grounded in the nature of nursing as initially described by Florence Nightingale (NACNS 2004). While the APN concept is still relatively new, distinct patterns of evolution are evident over the last 100 years. The evolution from nursing to APN has moved along the stages of development of a specialty focus, organizing specialty training, and standardizing graduate training. Historically nurses have responded to the unmet needs of the health care system by taking on additional tasks and attaining more and more on-the-job skills and expanding their practices to encompass these skills. In this way, over time, the definable specialties began to develop. (Ketefian et al. 2001, Hanson & Hamric 2003.) The term "specialist" emerged in nursing in the early 1900s (Gordon, Lorilla & Lehman 2012). Organizing specialty training first began in the 1960s in the USA and today a master's degree is a general mandate for advanced practice nurses in many countries (Sheer & Wong 2008, Delamaire & Lafortune 2010).

Many diverse socio-political and professional factors have been recognized as thriving forces of the APN roles (Ketefian et al. 2001, Bryant-Lukosius & DiCenso 2004). The health care system in Finland, as in many other countries, is facing great challenges and demands. To answer to these demands the APN roles have been incorporated and expanded upon to better utilize health care resources while simultaneously providing comprehensive care in order to contain costs, improve access to care, reduce waiting times, serve the underprivileged, and maintain health among specific groups (Chakravarthy 2008, Sheer & Wong 2008, Fagerström 2009, Delamaire & Lafortune 2010). Additionally, as staff availability, recruitment, and retention are one of the biggest global challenges within health care, APN roles are paramount in enhancing the nursing workforce appeal (NDP, 2008). For staffing the retention of experienced nurses is an important challenge, since the potential loss of experienced nurses is likely to exacerbate current nursing shortages. Thus, since nursing comprises the largest group of health care workers (Brooten et al. 2004, Pulcini et al. 2010), it offers therefore a large pool of resources for health care delivery and renovations.

Today APN is a recognized clinical career pathway for nurses wishing to remain in clinical practice (Furlong & Smith 2005, Gordon, Lorilla & Lehman 2012, Hutchinson 2014). APN roles represent the future frontier for nursing practice (Ruel & Motyka 2009), and

currently over 50 nations are developing these roles for nurses (Sheer & Wong 2008, Pulcini et al. 2010). Although the evolution of APN differs in each nation, similarities also exist (Ketefian et al. 2001, Sheer & Wong 2008). Countries, however, vary in the speed and readiness with which they have been able to develop APN roles (Bryant-Lukosius et al. 2004, Sheer & Wong 2008, Delamaire & Lafortune 2010, Pulcini et al. 2010). Although a few countries, such as the USA and Canada, implemented these roles after the mid 1900s (Sheer & Wong 2008, Lewandowski & Adamle 2009, DiCenso 2010), or late 1900s like Australia and England (Daly & Carnwell 2003, O'Baugh et al. 2007), most countries, including Finland, introduced their roles at the turn of the century (Sheer & Wong 2008). Furthermore, differing approaches have been taken to develop these roles in various countries with some beginning with the role and then developing the titles, scopes of practice, and regulation; while others began with regulation and moved on to educational programs and development of the role (Sheer & Wong 2008). The urgency needed to answer health care demands has led to the ad hoc introduction of these roles in many countries with the consequence of deficiency of policies, regulation, and preparation for APN roles, leading to inconsistent role development and implementation (DiCenso 2010).

NP and CNS have been recognized as the two most developed types of APN roles in many countries (Sheer & Wong 2008, Delamaire & Lafortune 2010). NP roles are well studied whereas CNS roles appear to be the most unclear of all APN roles (Dowling et al. 2013, Kilpatrick et al. 2013). The primary goal of the CNS, the focus of this study, is the continuous improvement of patient outcomes and nursing care. According to the National Association of CNSs in the United States (NACNS 2004), three interacting spheres of CNS influence are the patient/client sphere, the nurses/nursing sphere, and the organization/system sphere. The patient/client sphere includes the provision of both direct and indirect care (Ruel & Motyka 2009). Practice specialization and advancement are the main emphasis of CNS practice, although some elements of role expansion and furthermore autonomy may be evident.

2.2.2 Advanced practice nursing in Finland

The advanced practice nurse term (asiantuntijasairaanhoitaja) emerged for the first time in Finnish literature in the 1980s (Merasto 2011). The term CNS (hoitotyön kliininen asiantuntija) has been used since the early 21st century. Additionally the Finnish Nursing Association specialty titles (erityispätevyysnimike), clinically specialized nurse title (kliinisesti erikoistunut hoitaja), and clinical nurse science specialist title (hoitotieteen kliininen asiantuntija) are emerging in the health care environments. Today all these terms are, however, being used interchangeably with little comprehension or agreement of the scope of practice or variation between these roles, causing confusion internally and externally to the nursing profession. From other internationally recognized APN roles, the term nurse practitioner (NP) has not been translated into Finnish, although there might be local positions close to the scope of the NP role. Additionally, nurse midwife (NM) and nurse anesthetist (NA) positions exist in Finland, but the educational and other APN role domain requirements are not equal to international APN roles (see i.e. Malin & Hemminki 1992, Oinas, Nikkonen & Pietilä 1999, Vakkuri et al. 2006). APN roles, such as the CNS, were initially established in specialist health care settings rather recently after the turn of the century in the Hospital District of Helsinki and Uusimaa (Meretoja & Vuorinen 2000, Meretoja et al. 2002). As in other countries, these roles were established in Finland to

respond to health care environment needs (Hukkanen & Vallimies-Patomäki 2005, Fagerström 2009).

In Finland the lack of opportunities for registered nurses to progress with their career while remaining in clinical practice has previously caused talented nurses to move away from direct patient care to nursing management, teaching, or other health care specialist positions. The negative consequence of this migration is the loss of valuable leadership and clinical expertise from in practice settings and at the point-of-care. Although the specialty practice patterns and education have been in existence in Finland for decades (Malin & Hemminki 1992, Vakkuri et al. 2006, Fagerström & Glasberg 2011), the education for APN roles has commenced rather recently. The polytechnic institution pilot advanced practice nurse education first commenced in 2006 (Fagerström & Glasberg 2011) and was formalized by the Ministry of Education and Culture in 2010. Universities have provided master's level education for nurses since 1979 with advanced clinical nursing programs in place since 1991 (Suominen & Leino-Kilpi 1995). There is no nationally congruent APN curriculum; however, this was recommended by a Ministry of Social Affairs and Health (MSAH) (MSAH 2012) steering group.

Although there is a long history of specialist nursing practice and education, the advanced level nursing roles have never been nationally conceptualized in the Finnish context nor licensed by the National Supervisory Authority for Welfare and Health, nor regulated by the Government (Hukkanen & Vallimies-Patomäki 2005). Hence there are no national definitions, guidelines nor policies in place regarding APN roles to support consistent role development within organizations. The only governing national document to touch upon the concept of APN, "Increasing the effectiveness and attraction of nursing care by means of management" (MSAH 2009a), outlines the advanced practitioners' responsibilities in evidence-based practice (EBP). Based on this document and MSAH (2012) steering groups' recommendations for nurse training, it may be concluded that the registered nurse has a possibility to advance in clinical nursing through three steps: 1) specializing in nursing (30 to 60 ECTS), 2) master's level advanced practice nurse education (210+90/300 ECTS), and 3) Doctorate level education. These documents briefly describe the above mentioned role priorities, however, they are strongly related to EBP and discuss APN education only from the polytechnic institution perspective. With the absence of national policies to guide advanced practice nurses role development, the definitions, nomenclature and role scopes are inevitably variable. Additionally the local criteria for the CNS appointments have been found to be diverse and imprecise in content, leaving them wide open to interpretation (Vestman 2013). Because of this varying nomenclature and criteria for the appointments, it is difficult to estimate the exact number of the current advanced practice nurse posts within Finland.

Currently APN in the Finnish context have, to a great extent, the same roles as in many other countries, but a lack of clarity in the role and the scope of practice remain (Fagerström 2009). To date there are only scarce national studies that have explored APN roles in the Finnish context. Earlier studies have explored labor division (Hukkanen & Vallimies-Patomäki 2005), clinical nurse science specialist roles (Korhonen 2008), local APN roles (Fagerström 2009, Fagerström & Glasberg 2011, Nieminen 2011), or criteria and grounds for appointing CNSs (Vestman 2013). This study is a nationwide study aiming to form a framework of CNS roles for the purpose of assisting consistent and effective role development, utilization and implementation in the Finnish health care setting. Although these practitioners may operate in primary or specialist health care, the focus in this study is specialist health care.

2.3 ADVANCED PRACTICE NURSING EFFECTIVENESS

Evidence supporting the effectiveness of APN has gradually built over time (Sheer & Wong 2008, Brooten et al. 2012) hence today there is a sizeable body of empirical literature supporting the advanced practice nurses contribution to health care (Brown 1998, Newhouse et al. 2011, Brooten et al. 2012). APN roles have improved access to care, contained health care costs, enhanced quality of care, and improved career prospects for nurses (Delamaire & Lafortune 2010). The quality indicators of individual advanced practice nurse care or their cooperative multidisciplinary intervention may be observed from various viewpoints such as patients, staff, nursing or organizations, through interrelated components of structure, process or outcome. Studies validating effectiveness of care should always include observation of all these components. (Gardner, Gardner & O'Connell 2014, Donabedian 2005.)

There is a high level of evidence that advanced practice nurses have improved the quality and accessibility of care with decreased costs, improved patient satisfaction and quality of care, and improved the hospitals magnetism (ability to recruit and retain high quality nurses) and nurses' job satisfaction (Brooten et al. 2004, Naylor et al. 2004, Newhouse et al. 2011). Advanced practice nurses provide safe, effective quality care to a number of specific populations in a variety of settings (Newhouse et al. 2011). Use of APN roles in *acute care settings* has been suggested to reduce length of stay and cost of care for hospitalized patients (Cowan et al. 2006, Newhouse et al. 2011). In *long-term care* the advanced practice nurses are associated with improvements in patients' health status and quality of life, and improvements in meeting personal goals and family satisfaction (Donald et al. 2013). Additionally in *elderly care* the advanced practice nurses' transitional care intervention increased the length of time between hospital discharge and readmission or death as well as reduced the total number of re-hospitalizations and health care costs in elderly people hospitalized with heart failure (Naylor et al. 2004). The outcomes of advanced practice nurses care have been found to be similar and in some ways better than care provided by physicians alone (Newhouse et al. 2011). Success has been noted to derive from provision of continuity of care and a holistic approach to address patient needs as well as from collaboration and coordination skills which enable them to navigate care systems in supporting the continuity of care (Naylor et al. 2004). Furthermore, studies have indicated advanced practitioners' greater use of preventive services, and greater patient independence, promotion of health, adjustment to illness, and stress management, as well as increased compliance with treatment (Brooten et al. 2004).

In addition APN roles have a positive effect on the health care workforce, thus they have been found to provide the post-holder with a sense of job satisfaction through increasing freedom and autonomy. Conversely job dissatisfaction is a major factor influencing nurses' intention to leave their profession (Collins et al. 2000). The APN roles therefore offer a means to combat the global challenge of nurse recruitment and retention, as these roles offer possibilities for career progression while staying in nursing; however, the APN roles need to be clearly described, and the post holders adequately prepared and supported to ascertain the effective implementation (Collins et al. 2000). As nurses comprise the vast bulk of health care workers it is crucial to ascertain the wellbeing and satisfaction of this group.

Although payers, providers, and consumers view quality indicators differently, with some focusing on structure, some on process, and some on outcomes of care, it is increasingly clear that APN does have a positive effect on patient outcomes, staff, and health care organizations (Brooten et al. 2004). The needs of the health care system and expectations of the consumers may be well met by the advanced practice nurses (Gordon,

Lorilla & Lehman 2012) if the strategic planning, and evaluation of these roles is well planned to support the role development, introduction, and evaluation. For successful role implementation and enduringness it is essential that advanced practice nurses continue to evaluate their practice to validate role impact on multiple outcomes on patients, staff, and organizations (Urden 1999).

2.4 SUMMARY OF THE LITERATURE

The explored literature described many facets of the multidimensional phenomenon of APN. Over the years APN roles have evolved through distinct patterns to better answer these multiple challenges and unmet needs of health care (Ketefian et al. 2001, Hanson & Hamric 2003, Sheer & Wong 2008, Delamaire & Lafortune 2010). The fast changing information society, tight economy, aging of the population, increased morbidity and lack of personnel are just a few challenges facing health care environments striving to produce cost-effective quality care for patients. Currently APN roles represent multidimensional contemporary nursing globally and are an invaluable asset in improving service quality and accessibility, containing cost, and retaining experienced nurses within the clinical environment (Brooten et al. 2004, Naylor et al. 2004, Newhouse et al. 2011).

Based on the literature all advanced practice nurses are nurses first (Hansonn, Hamric 2003), but specialization, expansion, advancement, and autonomy distinguish these practitioners from front-line nurses (Ketefian et al. 2001, Furlong & Smith 2005, Mantzoukas & Watkinson 2007, Bryant-Lukosius et al. 2004, Ruel & Motyka 2009). It is generally agreed that direct patient care is a central, defining feature of advanced nursing practice separating it from other advanced nursing roles (Ketefian et al. 2001, Ruel & Motyka 2009). Advanced practice nurses utilize advanced level skills and competency attained in master's or doctoral level education to achieve a broad scope of practice. Direct and indirect practice actualizes through the patient/client, nurse/nursing, and organization/system spheres. (NACNS 2004) Ultimately these roles will benefit patients, staff, the nursing profession, organizations and the community.

Much effort has been put into defining the APN roles and their attributes, yet, some ambiguity remains. Furthermore urgency to develop these roles has contributed to ad hoc development of these roles and hence the lack of policies and guidelines has induced inconsistent role development and implementation contributing to national and international confusion (Bryant-Lukosius et al. 2004). A continuous demand remains to increase common understanding of APN, to communicate consistently, and develop these roles coherently to enable future discussions, comparisons, and cohesive evolution of these roles (Bryant-Lukosius et al. 2004, Ruel & Motyka 2009, Spross & Lawson 2013). As the roles of APN are new in Finnish health care it is imperative to continue to work towards clearly defined roles and policies to guide national APN development and implementation, preferably in line with international roles. The specified focus of observation within this study is the CNS role which signifies experienced registered nurses who have attained a minimum of master's level education and scope of practice including internationally recognized advanced practice nurse functions such as advanced clinical practice, education, consultation, leadership, and research.

3 *Aims of the study*

This study, conducted in three phases, investigates the phenomenon of APN through one specific role: CNS. The aim is to describe the international and Finnish CNS roles and to identify implications for their future development and implementation. The ultimate goal is to develop a framework of CNS role to provide a national role conceptualization and standardization as well as promote consistent, effective role development and utilization in Finnish health care.

The specific study objectives were:

1) to describe the international APN roles in relation to the CNS role specifically (original publication I)
2) to explore how the Finnish university hospitals' CNSs describe their current role attributes, as well as the factors facilitating and hindering the implementation of their role (original publication II)
3) to identify and explore the perceptions of expert Finnish stakeholders about CNS role delineation and implementation (original publications III, IV).

4 Method

4.1 STUDY DESIGN

To obtain rich data about the research domain both qualitative and quantitative methods were used. The study design consisted of three sub-studies (Table 2) which were planned on a continuum to reflect and support each other. As the roles of CNSs are novel in Finnish health care and few national studies investigating these roles exist, a broad range of data collection sources and methods were used (Dixon-Woods 2005). A systematic literature review described existing international research literature on the APN roles and two following sub-studies examined the CNS role and its future visions in the Finnish context. The study design was developed to gain a better understanding of current CNS roles, and the individual, organizational and health system factors that influence their effective development and integration in the Finnish health care, as well as providing a vision for their future delineation.

To display the phenomenon and ideation for future CNS role development without preconception, an inductive approach was used. Due to the paucity of national literature or empirical studies, a systematic international literature review was conducted to provide an evidentiary foundation for the overall study. Systematic review results informed the purpose and methods of studies 2 and 3 and provided a point of reference for later observation and comparison of study results. These procedures aid the grounding of current and forthcoming delineation of the Finnish CNS role within the context of APN internationally.

Table 2. Study Design

Sub-study	Design	N	Time of study	Object of Study	Data analysis	Study objective number	Original publication
1	A systematic literature review	42	2010	CINAHL, PubMed Medline	Qualitative content analysis	1	I
2	Semi-structured individual interviews	11	2011	Finnish university hospitals' CNS	Qualitative content analysis	2	II
3	A policy Delphi	25, 22, 19	2013	Finnish CNS, advanced practice nurse educators, health care leaders	Quantitative and qualitative analysis	3	III, IV

CNS = clinical nurse specialist
CINAHL = Cumulative Index to Nursing and Allied Health Literature
PubMed = U.S. National Library of Medicine

4.2 A SYSTEMATIC LITERATURE REVIEW (Original publication I)

Method

A systematic literature review (Jones & Evans 2000) was selected for the first sub-study due to its ability to effectively bring together all previous research on a single topic and therefore provide a foundation for follow-up studies (Colling 2003, Popay & Mallinson 2010). An objective was to describe a role equivalent to the role of nurse consultant in England where the study idea originated from, therefore based on literature the roles of nurse consultant (NC, England), clinical nurse specialist (CNS, USA) and clinical nurse consultant (CNC, Australia) were selected for study. The rationale for the selection of these roles was to find APN roles that were similar with respect to their level of practice. The articles examining CNS roles were included only from the USA, thus these roles are not consistently defined in England or Australia as APN roles and their educational background may also differ.

The aim of the systematic review was to analyze and synthesize the retrieved literature in order to: describe APN role attributes, role implementation challenges, and outcomes of APN roles; find out whether these roles are consistent in the studied countries; and discuss whether an international consensus regarding the definition of the APN is possible or desirable. The review included both qualitative and quantitative studies to ensure broad description of the phenomenon.

Data

In May 2011 CINAHL and the U.S. National Library of Medicine (PubMed Medline) were systematically searched. Based on prior APN literature, the key words for searching CINAHL were: "nurse consultant", "consultant nurse", "clinical nurse specialist", and "clinical nurse consultant" (Walters 1996, Manley 1997, Vaughan et al. 2005, Woodward, Webb & Prowse 2005). In PubMed Medline the combinations of 'mesh' terms such as "nurse's role", "professional role" and "nurse clinicians", were used instead to search the database. To guide and delimit the data gathering, the inclusion criteria required the articles to: 1) be empirical research studies from England, Australia or the USA, 2) examine the roles of the NC, the CNS, or the CNC as their main concept, 3) be published between the dates of January 1990 and April 2011. Although in the USA the role of the CNS dates back to the early 1940s, the roles were introduced in England and Australia around the turn of the 21st century and hence the search was limited to publications between 1990 and 2011. Additionally, review articles were excluded from the study to avoid repetition of the results. Because of the relatively small number of studies selected, none were excluded based on the context, sampling, reflexivity, or quality. However, the studies were appraised on relevance, with the aim of acquiring an in-depth understanding of the study phenomenon.

Analysis of the data

The method used to analyze these data was qualitative content analysis (Graneheim & Lundman 2004). Articles were read through several times to extract and condense meaningful data from the results of each study. Additionally information on study design was collected. (Jones & Evans 2000.) Central themes related to the APN roles were revealed inductively through the process of abstracting and organizing the extracted text, and grouping together the emerging sub-categories and categories. Through organizing these emerging categories into themes, an APN role description was developed. Data from the original studies was extracted and analyzed initially by the principal investigator and there after discussed by the research group to scrutinize the findings to increase common understanding and

refine the processes. The data was managed using an electronic data extraction table developed for this study.

4.3 QUALITATIVE SEMI-STRUCTURED INDIVIDUAL INTERVIEWS (Original publication II)

Method
The second sub-study design was a descriptive qualitative study (Sandelowski 2000, Kelly 2010). As there is an absence of national studies investigating CNS roles within the Finnish context, it is imperative to produce information by qualitative methods that are effective in producing information where previously none existed. The objective was to explore the views of Finnish CNSs on their role prerequisites, role attributes, practice outcomes, challenges affecting role implementation, and the future development of the role with the aim of describing national APN roles in relation to the international CNS role.

To recruit the CNS for the study a purposive sampling method was used (Panacek & Thompson 2007). According to the inclusion criteria the informants had to: 1) have responsibilities in the CNS role domains, 2) be working in a university hospital as a CNS, and 3) have a master's degree education. The informants were approached with the help of head nurses.

Data
The data were collected through semi-structured individual interviews with current master's-prepared Finnish university hospitals CNSs in spring/autumn 2011. CNSs were encouraged to give their views on their practice as fully as possible. The interviews followed a predetermined study guide involving broad themes identified from the systematic literature review. These included demographic information, prerequisites of the CNS role, role attributes, role outcomes, challenges affecting the role implementation, and ideas for future role development. The interview guide was pre-tested with one specialist nurse meeting the inclusion criteria. In addition expert opinions were gathered both nationally and internationally prior to the study, after which minor revisions were made to the original interview guide (Kelly 2010). The interviews were conducted by the author of the thesis in a place appointed by the interviewee. Interviews were audiotaped with the informant's consent. The interviewer also made field notes after each interview. The data was managed using an electronic data extraction table that followed the themes of the interview.

Analysis of the data
The interviews were transcribed verbatim and the data were analyzed and combined using qualitative content analysis (Graneheim & Lundman 2004). In data analysis both inductive and deductive methods were used. Data were analyzed focusing on manifest content, which consists of the visible, obvious components of the text. Texts were read through several times to obtain a sense of the whole, after which meaningful units of the text such as words, sentences, and phrases were identified and extracted. The identified meaning units were condensed and coded, and thereafter codes were categorized into sub-categories which were abstracted into main categories. An example of the data analysis can be seen in Table 5. The initial content analysis was performed by the PhD student and further on discussed by the research team to attain common understanding and to foster the analysis process.

4.4 A POLICY DELPHI STUDY (Original publications III, IV)

Method
A policy Delphi study (Turoff 2002), a variant of the conventional Delphi panel, was selected for the third sub-study. Since it aims for no consensus but explores the various opinions (Turoff 2002, Powell 2003), a policy Delphi is an effective method to inform the decision-making process within the policy formulation process (de Loe 1995). The aim of sub-study III was to identify and explore the expert panelists' views on future CNS role implementation in Finland. The substantial study themes were: the futuristic CNS definition, role attributes and implementation, and the role threats.

Due to the large data quantity obtained in the policy Delphi study, in order to ascertain in-depth data analysis, the qualitative data on CNS role implementation were set aside from the first policy Delphi round for later separate scrutiny and reporting. These data were studied according to the qualitative descriptive study method (publication IV).

A purposive sampling method (Panacek & Thompson 2007) was used to recruit participants with wide ranging expertise. In policy Delphi, ten to fifty participants has been suggested as an appropriate number of experts (de Loe 1995, Turoff 2002). To recruit experts to the study, directors of nursing practice in five university hospitals, National Institute of Health and Welfare, Ministry of Social Affairs and Health, a nursing trade organization, and the universities and polytechnic institutions that have master in nursing science programs, were asked to give recommendations. Overall, 35 experts were recommended and asked to participate. The expert panelists' inclusion criteria were twofold: 1) interest group of advanced practice nurse, advanced practice nurse educator, or health care manager, and 2) expertise in the area of APN, education, management, health care workforce development, or international APN roles. All interest groups and specialties were evenly represented.

Policy Delphi rounds
Web-based online survey and analysis software was used during three iterative policy Delphi rounds conducted between June and October 2013. Both open-ended and survey questions were asked. The first round included mainly open-ended questions aiming to obtain baseline information for subsequent examination. This first round of qualitative data were transformed into measurable statements illustrating the views of the panelists for the purpose of establishing their position on each statement. On the second and third rounds the experts were asked to rate, re-rate and corroborate these formulated statements. By measuring the rated statements it was possible to evaluate whether the panel supported, opposed or was ambivalent towards the options pointed out by fellow experts (de Loe 1995). The iterative questionnaires were sent only to the expert panelists who had responded to the previous questionnaire, thus the policy Delphi process cumulates on the preceding investment. Table 3 describes the policy Delphi survey design in each round.

Table 3. The Policy Delphi Design in sub study III

Round	Design	Areas of questions	Pre-test
First	Mainly open-ended, few structured	Definitions, attributes, future vision on role and its threats, demographic information	Yes
Second	Likert scale and open ended to clarify rating	Definitions, nomenclature, work areas, competencies	Yes
Third	Likert scale	Regulatory issues, role domains, future threats, measuring the clinical nurse specialist role	Yes

Data analysis

Both qualitative and quantitative analysis methods were used. The data produced by the open-ended questions were analyzed by qualitative content analysis (Graneheim & Lundman 2004) and the quantitative data achieved through the statement ratings were analyzed by using the Statistical Package for the Social Sciences (SPSS, version 19.0). To detect any differences between the respondent categories the respondent ratings were also analyzed using the Kruskal-Wallis test.

On second and third round quantitative data analyses, each set of ratings were examined according to mean score, rating distribution, and consensus level. Mean scores were examined in order to assess the multiple statement preference when appropriate. Consensus was considered to be high, medium, low, or no consensus indicating the degree to which the group agreed on a given issue. Additionally further examination of each rating distribution was needed to observe whether the panelists' consensus opposed or supported each statement. (de Loe 1995.) A rating distribution and assessment example is provided in Table 4. From here it can be seen that consensus regarding CNSs expanded nursing activities is non-existent, yet, there is a weak support for this among panelists. Conversely there is a high level of consensus on and strong support for CNSs developing clinical practice within own specialty area.

Data from open-ended questions relating to role implementation in the first round were analyzed separately using qualitative content analysis (Publication IV). In analyzing these data inductive methods were used with the focus on manifest content. Meaningful units from the texts identified the strategies recommended by the expert panelists. These strategies were extracted, condensed, coded and categorized into sub-categories and finally into main categories.

Table 4. An example of rating distributions and assessment (Sub study III)

Assess the importance of clinical nurse specialist core competency description	**Number of Ratings on Scale (1=very unimportant, 2=unimportant, 3=important, 4=very important)** **1 2 3 4**	**Consensus**	**Support**	**Mean**
Acts in expanded nursing role according to set goal and assigned rights	4 4 8 3	None	WS	2.53
Develops clinical practice within own specialty area based on evidence based practice	0 1 4 14	High	SS	3.68

High consensus = 70% of ratings are in 1 category or 80 % in 2 contiguous categories;
Medium consensus = 60% of ratings are in 1 category or 70 % in 2 contiguous categories;
Low consensus = 50% of ratings are in 1 category or 60% in 2 contiguous categories;
No consensus = < 60% of ratings are in 2 contiguous categories;
SS (strong support) = >75% of ratings on point 3 and 4;
WS (weak support) = 50-75% ratings on point 3 and 4;
WO (weak opposition) = 50-75% ratings on point 1 and 2
SO (strong opposition) = > 75% of ratings on point 1 and 2

4.5 DATA SYNTHESIS

Method

Triangulation of research methods and data sources was used to examine different aspects of an overall study question in order to provide a preliminary framework of CNS role. Data from three separate original studies were combined through narrative synthesis. (O'Cathain 2010). Narrative synthesis is often used when the heterogeneity of included studies is high (Munn, Tufanaru & Aromataris 2014). The aim of the synthesis was to provide a clear account of the evidence produced in the original studies through chronicling and ordering of evidence (O'Cathain 2010) in order to inform nursing professionals, educators, directors, and other stakeholders about the CNS role attributes, implementation, and evaluation process. Eventually the framework should facilitate cohesive conceptualization and standardization of the national CNS role.

Data

Data consisted of the results of three original studies: a systematic literature review, semi-structured individual CNS interviews, and a policy Delphi study with expert panelists. Triangulation of methods ascertained the acquisition of multifaceted data. In addition international literature was utilized to strengthen the formulation of the role outcome evaluation as data from original studies within this area was limited.

Data analyses

Narrative synthesis includes a concise description of findings and interpretive as well as reflexive accounts that including higher levels of abstraction. (Dixon-Woods 2005.) Data analyses involved overlapping phases of data familiarization, identifying themes, arranging data against the themes, mapping and interpreting charts, as well as defining concepts, creating preliminary typologies, and finding associations between themes (Pope, Ziebland & Mays 2000). The data analysis was initially delineated by the PhD student, and furthermore discussed in length by the research team to further discuss the concepts and themes and to validate the synthesis. Data was managed through electronic tables and charts.

5 Results

5.1 INTERNATIONAL ADVANCED PRACTICE NURSING ROLES (Original publication I)

The searches yielded a total of 589 results. After careful scrutiny of articles against study questions and inclusion criteria, 40 articles were selected for review. A further two studies were included following a manual search of the references, thus the total number of articles reviewed, to describe the international APN role, was 42. Nineteen articles were from the England, 12 from the USA and 11 from Australia. Methodology within the articles was varied; 23 were qualitative, 13 were quantitative, and six used both methods. The results described the role prerequisites, role domains, and the role challenges as well as outcomes at an international level (Figure 1). Based on comparisons there was only slight variation between the three studied countries thus enabling the formulation of an international APN role description.

The advanced practice nurses' role goal is to improve quality of care (McFadden & Miller 1994, Walters 1996, Manley 1997, Blackford & Street 2001, Fairley & Closs 2006, Coster et al. 2006), support practice and staff development (Manley 1997, Manley 2000, Woodward, Webb & Prowse 2006), and promote retention of experienced nurses (Efinger 1995, Appel, Malcolm & Nahas 1996, Dawson & Spence 2001, Woodward, Webb & Prowse 2005). Preceding the successful advanced practitioner role, certain factors such as personal characteristics, prior education and experience and support for the role, can be seen as affirmative. Personal characteristics in combination with prior experience and a master's degree provide the skills and competence needed to prosper in the role (Manley 1997). Organizations and nurse managers need to ensure that components preceding effective role execution are acknowledged and incorporated into the APN role introduction process (O'Baugh et al. 2007). Adequate support mechanisms at many levels within organizations are required for successful role implementation, hence lack of support has been found to hinder role implementation (McFadden & Miller 1994, Coster et al. 2006). Additionally deficiency of support mechanisms aggravates the factors challenging APN role development. Multiple organizational, resource, interaction, and role challenges influence each other and may hamper advanced practice nurse role achievement. Evolving role, vague definition, lack of remuneration, and the role's complex and diverse nature, are just a few examples of the challenges facing these practitioners, hence the position was seen to be affected by a variety of influences, many of which are outside the individual advanced practice nurse control (Walters 1996, Woodward, Webb & Prowse 2006).

The advanced practice nurse domains extracted from the data were: advanced clinical practice, practice development, education, research, consultation, and administration, which frequently overlap but nevertheless inform each other (Manley 1997, Jinks & Chalder 2007). Advanced practice nurse focus on various domain activities may vary depending on organizational needs and individual post holder strengths (Vaughan et al. 2005, Woodward, Webb & Prowse 2006, O'Connor & Chapman 2008, Mitchell. et al. 2010), however, to utilize this significant role, activity within each domain is required (Woodward, Webb & Prowse 2006). Advanced clinical practice was unanimously identified as the main or central domain comprising up to 50% of the advanced practice nurses' total working time (McFadden & Miller 1994, Charters et al. 2005, Darmody 2005, Jinks & Chalder 2007). The practice development domain also emerged clearly from the literature although embedded in many role domains. Similarly the consultation function presented itself as merged within many

activities. In education activities the advanced practice nurse uses formal as well as informal opportunities to strengthen the knowledge base and skills of the multidisciplinary team. The involvement in research activity appeared low to non-existent (Dawson & McEwen 2005, Woodward, Webb & Prowse 2006, O'Baugh et al. 2007) with lack of time implied as the major contributor. Additionally there was less enthusiasm about management activities as a part of the role but a recognition of priority of leadership activities existed (Manley 2000, Woodward, Webb & Prowse 2005, Abbott 2007, Jinks & Chalder 2007).

Benefits of the APN are evident in the areas of patient care, staff, nursing practice and organization. With appropriate support, careful implementation, and regular evaluation, the role will have a positive contribution to clients, nursing as a profession, provision of quality care, and the organization.

Goal	Prerequisites	Challenges	Domains	Role Contribution
•to ensure the provision of quality care •to develop nursing practice •to retain experienced nurses	•personal characteristics •prior education and experience •support for the role	•organizational barriers •resource deficiencies •interaction issues •role challenges	•advanced clinical practice •practice development •education •research •consultation •administration	•patients •staff •nursing practice •organization

Figure 1. International attributes of the advanced practice nurse

5.2 FINNISH CLINICAL NURSE SPECIALIST ROLE (Original publication II)

Due to the newness of the role, very few CNS positions existed in Finland at the time of this study took place. Thirteen participants who met the eligibility criteria were approached and all agreed to participate in the study. However, two scheduled interviews were cancelled by the interviewee at last minute. Thus in total, 11 CNSs participated in this study. Each interview took from 45 to 60 minutes. The interviews were transcribed verbatim and consisted of 131 pages (line spacing 1.5).

The informants did not represent all university hospitals but they worked in various specialty areas. The participants were all females between the ages of 37 and 56 years. They all had substantial nursing experience and were masters-prepared in nursing science. The participants' job title was a close translation from CNS and they had acted in their Finnish CNS roles from a few months to four years. Additionally, most of the participants had work experience in managerial, or other advanced specialist roles such as research or teaching.

The Finnish CNS elaborated on their role thus enabling comprehensive description of the current role. The role goal is to assure quality of care, support staff, corroborate the organization's strategic work, and support and implement evidence-based practice. The CNS role actualizes through four distinctive, yet interrelated role spheres of patient, nursing, organization, and scholarship (Table 5).

Table 5. Clinical nurse specialist spheres of practice

Theme	Main category	Sub categories	Examples of meaning units
Spheres of practice	Patient Sphere	Being an expert in clinical practice Act in vast remit of clinical chores Implement EBP procedures	"I have worked a long time in this specialty, so I can really act as an expert" CNS 6 " I do everything that nurses do but in a higher level " CNS 3 "I coordinate patient care" CNS 1 "I have my own patient load" CNS 4 "I implement evidence based care " CNS 6
	Nursing Sphere	Being a support person Assure quality Implement education to support know-how Detect problems Assure EBP utilization	"I support staff with complex cases" CNS 1 "I assure our guidelines are up to date" CNS 8 "I assure staff know-how" CNS 2 "I teach how to utilize research" CNS 9 "I see myself as sort of bridge in bringing the scientific evidence to day-to-day nursing and thereon I try to support its entrench to the routines." CNS 1
	Organization Sphere	Consult multidisciplinary team Being a consultation resource Nursing promotion Managing without authority Leading without subordinates	"I do consultations" CNS 5 "I have time to enquire about things consulted from me" CNS 8 "CNS leads a way for nursing science" CNS 3 "I have a great opportunity to bring forward nursing" CNS 8 "I'm not authorized to make decisions" CNS 7 "This is different kind of management…not like a manager...but managing change through authority and changed attitudes." CNS 10 "I lead clinical nursing practice" CNS 1 "I don't have subordinates." CNS 5
	Scholarship Sphere	Coordinate and catalyze developments Strengthen EBP Assess know-how to plan education Conduct research Being a research resource	"I act as a catalyst in developments" CNS 5 "I strengthen EBP procedures" CNS 2 "I have research related chores" CNS 10 "research takes about 20% of my time" CNS 6 "I am a tutor for students who conduct research" CNS 6 "I coordinate research projects" CNS 7

CNS = clinical nurse specialist
EBP = evidence based practice

The patient sphere is achieved through being an expert in clinical practice, acting within a broad remit of clinical activities and implementing EBP procedures which continue to be assured within the nursing sphere. Additionally the nursing sphere features the CNS functioning in various quality assurance activities, supporting know-how of the staff, detecting problems, and acting as a support person. Within the organizational sphere the consultation, nursing promotion as well as leadership and management aspects of the role are actualized. Furthermore in the scholarship sphere the CNS complements and supports role achievement through coordinating and catalyzing nursing developments, working toward EBP formulation and dissemination, and assessing know-how in order to plan education, as well as conducting research and acting as a research resource. The CNS scholarship activities contribute to nursing practice, the profession, and scholarship

progression. The spheres of practice are interrelated with vague boundaries and varying emphasis, nevertheless the focus of attention appears to be on the patient and nursing spheres which are furthermore supported through the organizational and scholarship spheres. (Figure 2)

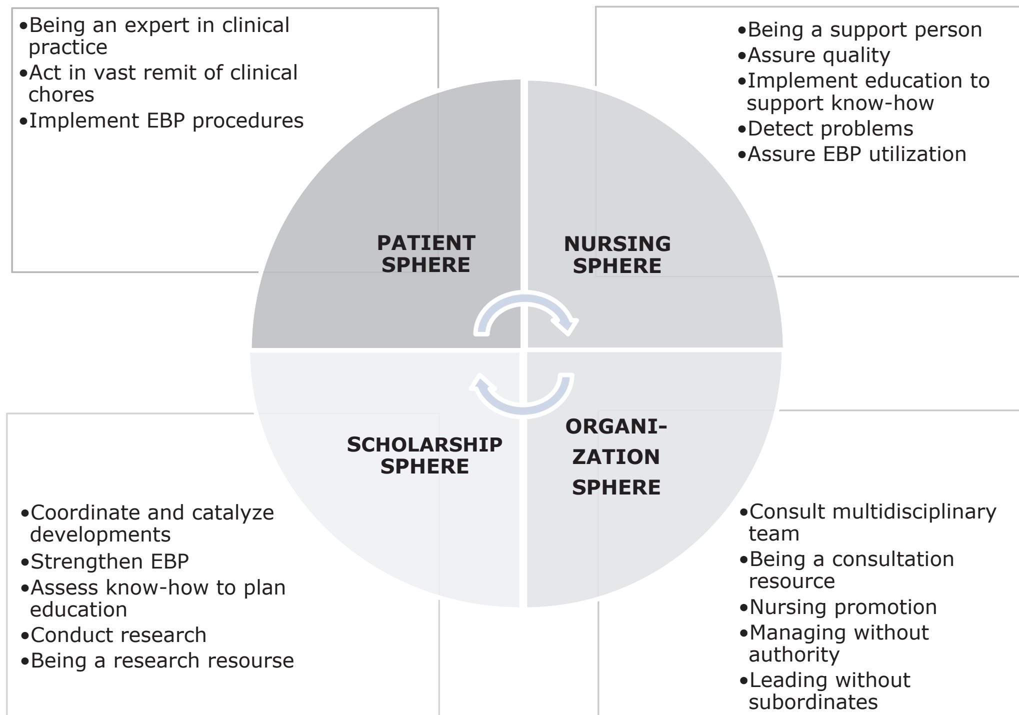

Figure 2: CNS interrelated role spheres
EBP=evidence based practice

Within each sphere the six domains of advanced clinical practice, practice development, education, research, consultation, and leadership, may be enacted to varying levels to achieve the role requirements. The CNSs saw the practice development domain as the most important, while advanced clinical practice was seen as the most controversial domain. Although clinical work was seen as important, the CNSs were perplexed and unsure about the content and objective of this domain. As one CNS said: *"A challenge is that what the advanced level clinical work is? If it is the same work that we have been doing earlier (as a nurse) then what is the difference?"* One-third of the informants spent 15 to 50% of their working time in direct patient care but the remainder spent none. A considerable factor limiting the advanced clinical practice empowerment was the extensive highly specialized work areas hindering the opportunities to prosper within this domain. The CNSs' work areas could include up to 50 wards with varying specialties, and therefore the achievement of advanced direct patient care was indeed understandable. In addition, the research domain was an area of diversity, thus a third of the informants stated they participated in no research

activities. Research conduct was felt to be challenging with current resources, hence requiring much time and effort. Furthermore the leadership domain was seen narrowly from a managerial viewpoint. An interesting fact was that those CNSs who were more active in advanced clinical practice also recognized the opportunities and necessity of possessing a clinical leadership role.

The Finnish CNS role barriers, facilitators, and role development needs are explicitly interwoven. Role barriers informed the role development needs, and role facilitators helped the CNS confront the challenges; thus both, inevitably, impact on current role achievement, as well as contributing to future role development (Figure 3). Several factors related to the individual, community and organization were identified as challenging successful role implementation. In turn the participants identified various facilitators to combat these challenges. Some facilitators, for example CNS skill and knowledge base, prior experience, and organizational implementation strategy, can be seen as role prerequisites, while others contribute to the present role achievement. The CNSs were also enthusiastic and committed to achieving the role requirements, therefore playing an important part in sustaining the role actualization.

CNS Role Barriers

- pioneering role
- ambitious role scope
- difficulties to triumph domains
- role position difficulties
- vague definition
- incoherent policies
- bureaucracy
- scattered management
- inadequate resources
- outcome measuring difficulties
- lack of role visibility
- collaboration difficulties
- educational defects
- social challenges

CNS Role Facilitators

- CNS personal attributes
- organizational implementation strategy
- management support
- collaboration with associates
- constructive feedback
- affirmative teams
- nationally coherent role development

CNS Developmental Needs

- to improve domain functioning
- to expand CNS networking
- to clearly define organizational guidelines
- to integrate organizational policies
- to organize role promotion
- to systematically measure the role effectiveness
- to define national role attributes
- to entitle APN roles
- to develop national APN curricula

Figure 3. National clinical nurse specialist role barriers, facilitators and developmental needs

CNS = clinical nurse specialist
APN = advanced practice nursing

5.3 VISION FOR THE FUTURE CLINICAL NURSE SPECIALIST ROLE (Original publication III)

Three iterative web based survey rounds were conducted in 2013. The response rate was 71% (n=25) in the first round, 63% (n=22) in the second, and 54% (n=19) in the third round. The nationwide expert panel generated considerable data for analysis. To indicate the expertise of the panel the panelists were asked to self-rate their clinical expertise on a scale of 1 (little experience) to 4 (a lot of experience). Data from the participants can be seen in Table 6. All interest groups and specialties were evenly represented and on examining the

results there was no statistically significant variation observed between interest groups using the Kruskal-Wallis test. Based on the results, a preliminary CNS role definition was composed and the panelists' views on future role attributes such as education, work area, practice domains, role implementation measuring, and regulatory issues were identified, explored and described.

Table 6. Data of the participants on policy Delphi (n=25)

Variable	**n**	**%**
Age		
36-50 years	10	58
over 50 years	14	42
Work experience in current post		
1-10 years	19	76
over 10 years	6	24
Self-rated expertise (4=a lot of expertise, 1=little expertise)		
APN roles		
rating 3 – 4	21	84
rating 1 – 2	4	16
APN education		
rating 3 – 4	16	64
rating 1 – 2	9	36
APN management		
rating 3 – 4	15	60
rating 1 – 2	10	40
APN roles internationally		
rating 3 – 4	12	48
rating 1 – 2	13	52
Health care system development		
rating 3 – 4	19	76
rating 1 – 2	6	24

APN = advanced practice nursing

CNS role attributes

To begin with, a general definition of CNS was formulated from expert panel responses to open ended questions in the first round of the Delphi study. In doing this the purpose was to illustrate the present understanding of CNS roles and to segregate the intended focus of observation from related APN roles. According to the formulated definition *CNSs are independent practitioners with advanced level skills utilized in advanced clinical practice, practice development, education, consultation, and leadership as well as research and EBP. They have comprehensive vision and knowledge of the health care system which they use to guide and develop nursing practice when working in collaboration with multidisciplinary teams. CNSs work in unit, clinic or at the organizational level in primary or specialist health care utilizing a wide range of work experience and knowledge attained through the master's' level education*. This general description of the CNS role attained a high level of support from expert panelists as well as suggestions for its further development. The title "kliininen hoitotyön asiantuntija" was suggested as the most appropriate to nominate for these practitioners, although it received only weak support.

Although master's level education was recognized as the generic education for a CNS, the dual educational system in nursing was identified as causing difficulties in specifying the educational requirements. There was a polarity of expert opinion on whether the baseline education for a CNS should be gained in a university or polytechnic institutions. Due to differences between these two educational institutions, there was a high level of consensus supporting a clear distinction between them. According to the experts the educational preparation should, however, be close to the international level, and be built around national core competencies.

Seventy-five preliminary CNS competency descriptions were extracted from the data, for which nearly 90% received strong support, with a high level of consensus on their importance (Appendix 2). These core competencies are utilized in the spheres of patient, nursing, organization, and scholarship within which the CNS domains also actualize. From the domains, practice development, education, clinical research, and consultation, were seen as desirable and probable future CNS domains. Nevertheless, clinical leadership achieved low support on probability and desirability and opinions related to advanced clinical practice were highly polarized, with both for and against reasoning displayed to support claims for inclusion or exclusion of this domain (Figure 4). It was argued, albeit not agreed on, that CNS is a genuine 'clinical nurse specialist' only if the role centers specifically on clinical patient work. The panel's opinion as to whether the CNS should spend time in advanced clinical practice or not remained, however, polarized throughout the research.

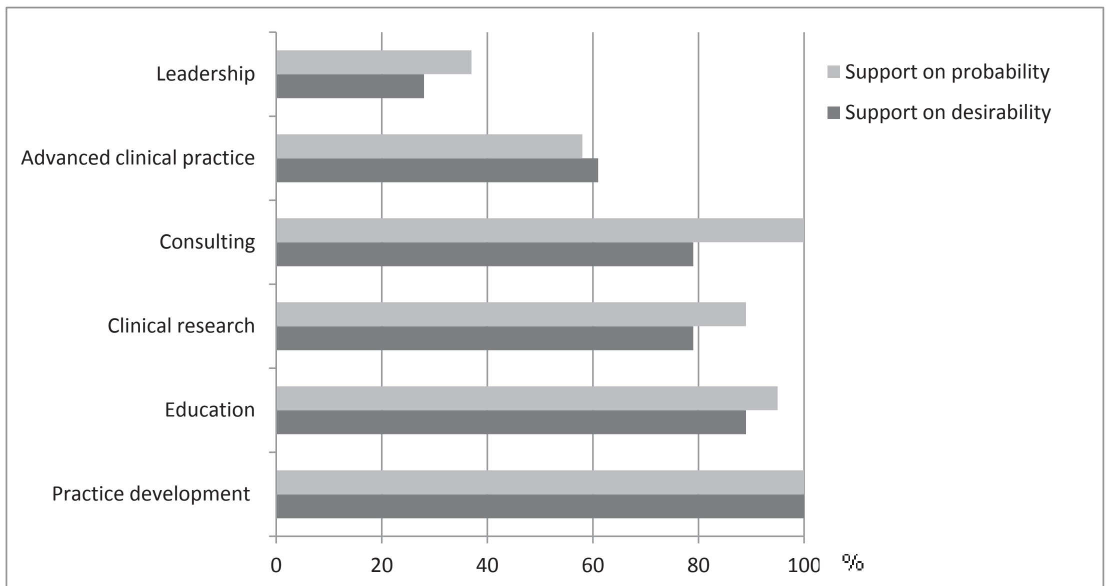

Figure 4. The desirability and probability of clinical nurse specialist role domains in the future

According to the panelists the CNS work areas may be constituted according to the needs of organizations and should preferably include several units bound to specialty nursing areas. They may work in primary or specialist health care and even joint roles were recommended, although opinions on this were also polarized. In order to evaluate and

assess the work, several measurement methods were identified. The ones with high support are detailed in Appendix 3. In addition, the experts took a stance on the core regulatory issues which were then rated for their desirability and probability. According to the experts the CNS policies, education and core competencies should be defined and combined nationally. Title protection, national registration, as well as the requirement for CNS knowledge base re-examination, were also regarded as desirable, although, the probability of these was considered low. Contemporary registration was not recommended at this point by the experts. The statements formed on regulatory issues and their consensus levels can be seen in Figure 5.

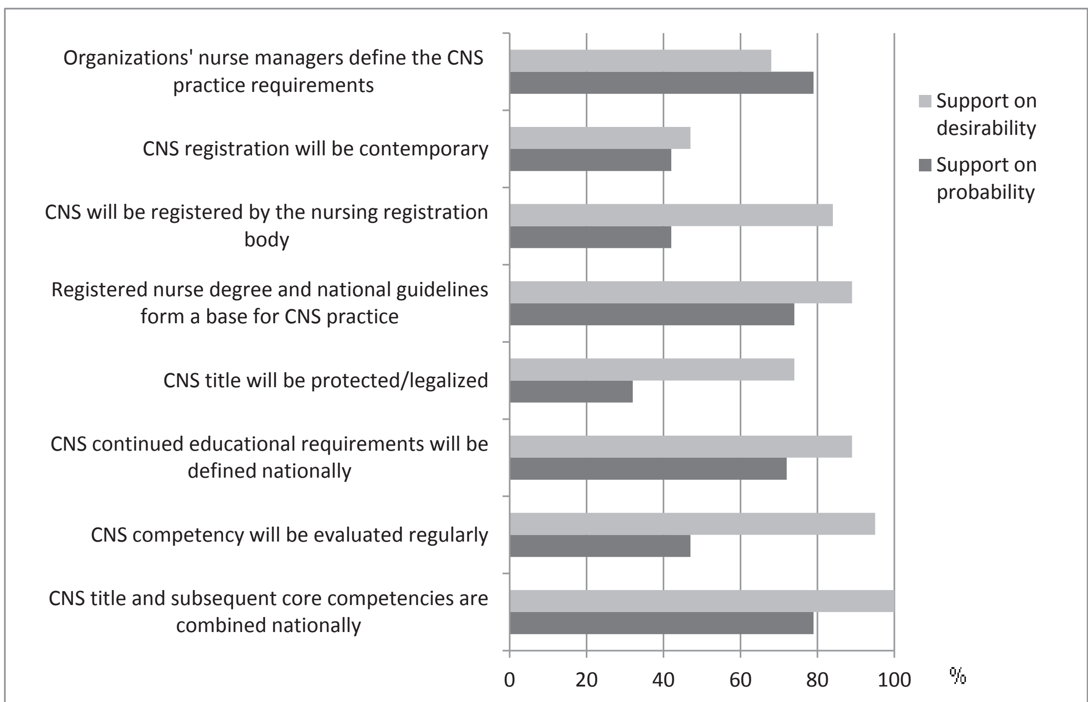

Figure 5. The experts' ratings on probability and desirability of clinical nurse specialist regulatory items
CNS = clinical nurse specialist

Possible threats of the future role

A number of external future CNS role threats envisioned by experts were recognized. These threats stem from national, health care environment or organizational origins. Out of 25 potential threats extracted from the data, the ten most probable are listed in Table 7. The most probable threat to the future role, recognized by all participants, was the tight economic situation, which could cause the roles not to be implemented. Other threats with strong support were insufficient remuneration and lack of nursing staff, causing the CNS resource to be redirected to provide frontline clinical nursing. Threats with lower levels of support included: the health care organization not being able to renew its functioning and job descriptions, the evidence to support the CNS role not being sufficient, the education

not being renewed fast enough, and the clinical work not being at the core of the role, as well as losing the advanced clinical experience due to possible role shift from clinical practice into an office post, causing inevitably the role to cease, inter alia. Of all the threats perceived by the experts, the three most important, with the most problematic consequences, were the economic situation, the problems with the dual model of nursing education, and the differences in how the CNS role was viewed by different disciplines.

Table 7. The most probable threats to the clinical nurse specialist role envisioned by the experts

Threat identified	**Mean score**	**Support on probability**
! No posts will be implemented due to economic pressures	3.73	SS
! Dual model of education causes confusion	3.60	SS
Remuneration fails to acknowledge the CNS knowledge base and responsibility	3.33	SS
Lack of nursing staff will lead to the CNS resource being appointed to frontline clinical work	3.27	SS
! Varying views and attitudes on CNS role hinder the role development	2. 93	WS
The role of CNS will remain vague because of the unclearly defined role	2.73	WS
CNS will have no power to work within an organization	2.73	WS
The visibility of the CNS role will remain low	2.73	WS
There will be no national view on the CNS role, competences, education, and other role requirements	2.67	WS
The employer is unaware how to utilize the CNS resource	2.95	WS

CNS=clinical nurse specialist
SS (strong support)=>75% of ratings on point 3 and 4;
WS (weak support)=50-75% ratings on point 3 and 4;
!=most significant impact

5.4 SUCCESSFUL CLINICAL NURSE SPECIALIST ROLE IMPLEMENTATION (Original publication IV)

The expert panelists' remarks on CNS role implementation were explored separately from the main policy Delphi study. Through data analysis three phases of successful role implementation were revealed: establishing the CNS role, engaging the CNS role, and securing the CNS role (Figure 6). These phases manifest a continuum where moving to and fro between each phase is inevitable. In this continuum an investment and close collaboration from nursing professions, organizations, and government is required. The role implementation was often referred to in a passive tense, although the nurse manager's role was seen as important throughout the establishment, engagement, and securing of the role contributed greatly to the nursing profession's development, thus becoming the most probable catalyst and agent in the CNS implementation.

Within the first phase, establishing the CNS role, the role needs and goals, national policies, nomenclature and national regulation need to be pursued. National policies should decipher CNS definitions, goals, scope of practice, domains, and competencies, as well as educational requirements. CNS roles should be based on need and subsequent setting of goals. Role design and possible role expansion will follow careful needs analysis. To enable

CNS role to actualize, the work environment and organization must be modified. New roles need to be devised together with central stakeholders to engage them in the process and enable effective redesign of the wider spectrum of health care roles. Through reaching consensus on the core attributes the role will become structured and more concrete. Finally, to protect both practitioners and patients, the CNS role regulation with nationally specified standards and requirements for licensing and education are also needed. Furthermore the legislation should cover all APN positions. Finally coherency, a profound need throughout the process of establishing the CNS role, enables cohesive role development in line with international roles. This was seen to improve cooperation and communication, internal and external, to nurses' own profession and country, thus allowing utilization and comparability of research knowledge as well as CNS mobility in the global health care environment.

Engaging the CNS role includes advocating for the role to health care and society, committing the organization in the process, implementing roles, ensuring CNS competence, and enabling networking. The stakeholders and patient population should be informed of the CNS role need and goal in order to justify and specify roles, thus forming grounds for prosperity. In addition cultivating society about the roles and their value is needed. The newly established role's clarity and visibility is important, hence only after people know about and understand the role can they begin to appreciate and insist on the care of these practitioners. Organizations must also commit on multiple levels, creating positions linked to organizational strategy, determining positions and CNS role expectations, and allocating sufficient resources. Additionally increased understanding and visibility of these practitioners within the organization, is also needed. In implementing posts manager support was recognized as an implicit premise for enabling the role. Furthermore, innovative nursing role implementation will be supported by advanced competencies and acting in close proximity to the clinical environment. The basic education and opportunity for continuous education will ascertain the CNS knowledge base and competence. National career programs covering the whole APN role continuum should be in sync with the international roles and nomenclature. To arrange and assure continuous CNS education and regular demonstration of know-how to ascertain knowledge base and continuous learning, organizations' and educational institutes' cooperation is required. Finally, an important cornerstone of the practice is the enablement of networking opportunities, thus it is a crucial part in supporting these practitioners on a personal and professional level.

The final phase in the CNS role implementation is securing the role, by strengthening the evidence base, identifying risks, and anticipating the future. To strengthen the role rationale, evidence based practice corroboration and showing evidence of the role and its effects are needed. Hence it is essential to ensure CNS research skills are adequate. A close cooperation with universities to maintain research knowledge and utilize the research domain was recognized as important. Additionally the risk factors impairing the quality of care and CNS role actualization need to be recognized and responded to. Furthermore CNS need to be at the forefront of developments to ensure cutting edge performance, thus the anticipation of future development needs and patient care needs will remain at the heart of this profession. To secure the CNS role in health care and within the community, participation and involvement in society and policy building with central stakeholders is a vital prerequisite.

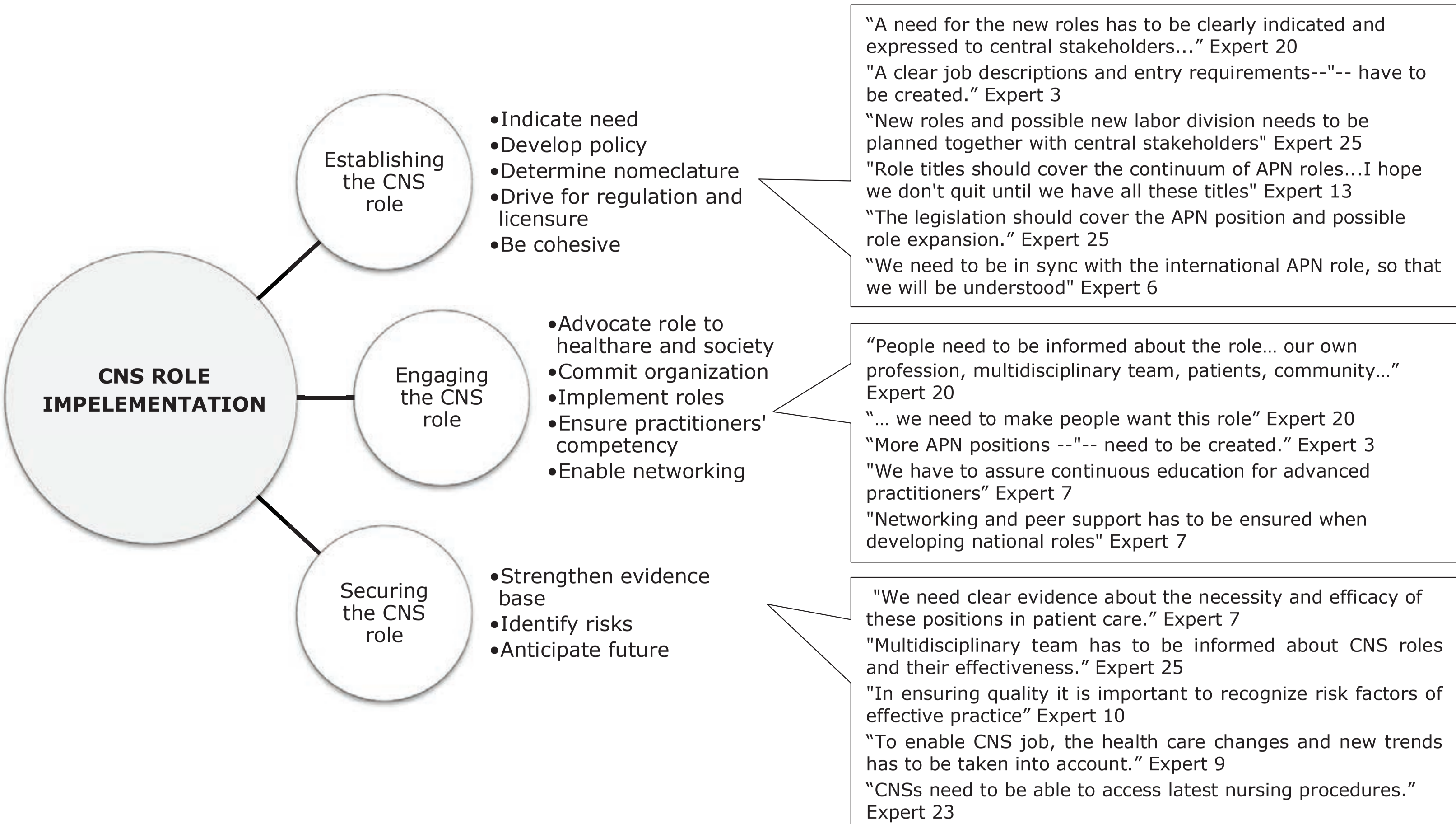

Figure 6. The phases of clinical nurse specialist role implementation
CNS= clinical nurse specialist

5.5 CLINICAL NURSE SPECIALIST CONCEPTUALIZATION, IMPLEMENTION, AND EVALUATION FRAMEWORK

Data and method triangulation was achieved through three original studies: a systematic literature review (n=42), semi-structured individual CNS interviews (n=11), and a policy Delphi study (first round n=25, second round n=22, third round n=19). The original studies have been reported above in detail. The following section describes the results of subsequent narrative data synthesis. The results of the original studies were convergent and offered complimentary information on the CNS role. No major discrepancies were revealed between different study parts. Table 8 highlights the identified concepts, themes, and relevant study sources illustrating the emergence of similar themes across the three studies. Based on the literature and empirical evidence, a foundation for categorizing and appraising the CNS role attributes was built by producing the conceptual descriptions of the central concepts and terms (Table 9). Furthermore the CNS conceptualization, implementation, and evaluation framework, depicted in Figure 7, illustrates how these essential CNS role components are explicated and included in the successful role implementation and evaluation process. Concepts and potential relationships between concepts are also identified although require further examination and testing.

The CNS role is situated in and affected by the global, national, health care and organizational environments. These environments expose CNS practice to threats but also opportunities affecting role implementation. The role implementation and evaluation process actualizes in the interfaces between the various environments drawing from each one and requiring acknowledgement and cooperation of central stakeholders. The central attributes of the CNS role, detailed in Figure 7, are general to all CNSs although adapted to individual posts and specified during the continuous phases of *need analysis, designing, implementing, and evaluating of the CNS role*.

The foundation of each CNS role should be the *need analysis* during which the current care modules are described and needs indicated. Based on this need analysis the individualized CNS role goals should be set which will guide *the role design*, a major and most extensive role implementation phase. The CNS *role design* should be based on the national policy including issues such as definition, nomenclature, legislation, licensure, and educational requirements to foster cohesive role development and offer a solid foundation for the practice blueprint. The emphasis of CNS role attributes are indicated based on goals set. Although the weighing of domains (advanced clinical practice, practice development, education, consultation, leadership, and research) or spheres (patient, nursing, organization, and scholarship) may vary depending on the goals or CNS strengths, each should be enacted to effectively achieve the role. Domain and sphere emphasis, and the distinguishing CNS features (clinical nursing, role expansion, specialization, advanced level skills, and autonomy), inform competencies (appendix II). Although the national competency descriptions should be a general foundation, individualized weighting is needed to specify the competency requirements of each post. Following the careful planning of the role attributes, the post requirements need to be *set* and job descriptions written. Lastly, implementation and evaluation plans for the role should be devised and the contributing factors identified prior post establishment to support the role introduction. The role evaluation may include baseline data collection and additionally effective future role implementation will be enforced by identifying the contributing factors to reinforce the internal facilitators and external support, and handle barriers and threats to the role.

Table 8. Illustration of identified concepts and themes

Sub-study / Original publication	Concepts identified	Themes
Systematic Literature review on international APN roles in England, USA, and Australia (n=42)/ Original publication I	• role goals • prior education and experience • personal characteristics • advanced clinical practice • practice development • education • research • consultation • administration • role support and challenges • benefits	• Role rational • Pre-requisites • Domains of practice • Role contributors • Outcomes
Qualitative semi-structured individual interviews for Finnish clinical nurse specialists (n=11)/ Original publication II	• role goals • patient sphere • nursing sphere • organization sphere • scholarship sphere • advanced clinical practice • practice development • education • research • consultation • leadership • role barriers and facilitators • role benefits • role development needs • stakeholders	• Role rational • Spheres of practice • Domains of practice • Pre-requisites • Role contributors • Outcomes • Developmental needs
Policy Delphi study with APN expert panelists (n= 25, first round) (n=22, second round) (n=19, third round) / Original publications III, IV	• clinical nurse specialist role goal • clinical nurse specialist role definition • dual model of education • baseline education / continuous education • advanced clinical practice • practice development • education • research • consultation • leadership • practice focus • CNS competencies • titles • licensure / legalization • work area • role threats • measuring methods • implementation strategies • environments	Futuristic: • Role attributes • Clinical nurse specialist role delineation • Regulation • Entry requirements • Education • Policy issues • Competency descriptions • Role contributors • Role evaluation • CNS role implementation

CNS = clinical nurse specialist

Table 9. The conceptualization of the future Finnish clinical nurse specialist role

Future CNS role attribute	**Conceptual description**
Legalization	CNS roles and level of practice should be legally defined by the government with clearly stated rights and requirements for licensure.
Licensure	Licensure provides verification that recognized educational programs prepared the individual CNS to practice. CNSs are to obtain national licensure (from Valvira) to grant approval to practice as a CNS.
CNS education	Master's level curriculum preparing CNS for practice should be clearly designed and articulated. Educational curriculum should be drawn based on the nationally established core competency descriptions and licensure requirements.
Regulation	State provides nationally specified standards and requirements for licensure and education.
Nomenclature	Nominating different APN roles such as CNS (kliininen hoitotyön asiantuntija) thus recognizing clinical career pathway for nurses wishing to remain in clinical practice.
Needs analysis	Cooperative (re)analyzing of current care modules, indication of needs, and subsequent defining of CNS practice goal(s).
Entry requirements	Registered nurse, prior nursing experience, minimum of master's level education, distinguishing personal characteristics.
Goal / role rationale	To ensure provision of quality care, to implement evidence-based practice procedures, to develop nursing practice and staff competencies, to support staff and, to support organization's strategic work, and to retain experienced nurses in the clinical environment.
Distinguishing features	Evidence-based clinical nursing is a central feature of practice. Additionally role expansion, specialization, advanced level skills, and autonomy all distinguish CNS role from front-line nursing; however, the emphasis on each may vary. Centering only on one feature does not verify practice at advanced level.
Spheres of activity	CNS practice centers on the patient sphere, nursing sphere, organization sphere, and scholarship sphere within which requirements of care are achieved through evidence-based practice and advanced competencies in the areas of practice domains. Each CNS should include all spheres of activity to contribute effectively to clinical nursing practice.
Practice focus	The central CNS focus of practice should be advanced clinical nursing where both direct and indirect activities are commonly applied.
Practice domains	Practice actualizes through the domains of advanced clinical practice, practice development, education, consultation, leadership, and research. Focus on domain activity may vary depending on the organizational needs and CNS strengths; nevertheless, to utilize the role, activity within each domain is required.
Core competencies	Seventy-five preliminary competency descriptions (Appendix 2) reveal the core expertise of all CNSs, weighted variably according to individual CNS, role goals, as well as emphasized domains and spheres.
Implementation strategy	Effective CNS role implementation includes the overlapping phases of designing, introducing and evaluating the role.
Practice facilitators (internal contributors)	Facilitators helping CNS counteract barriers to the role include skill and knowledge base, prior education and experience, management support, affirmative teams, constructive feedback, collaboration with stakeholders, and networking.
Practice barriers (internal contributors)	Several factors such as pioneering role, ambitious role scope, collaboration difficulties, and outcome measurement difficulties, impact role achievement and inform role development needs.
External opportunities	Clear organizational implementation strategies, nationally coherent role policies and development, and opportunities for continuous education are external opportunities of the CNS role.

(Table 9. continued)

Table 9. (continued)

External threats	Include tight economy, inadequate resources, vague or incoherent policies, bureaucracy, scattered management, lack of role visibility, and dual model of education, inter alia.
Stakeholders	CNS work with several central stakeholders in various environments such as: patients, nurses, head nurses, nurse directors, other advanced practice nurses, educators, physicians, researchers, and politicians.
Outcome	Outcome of care may manifest in patient benefits, increased nursing quality, staff profits, improved organizational performance, and advancements in nursing scholarship.
Measuring role outcome	Quality indicators of individual CNS care or their cooperative multidisciplinary intervention may be observed from various viewpoints such as patient, staff, nursing or organization, through interrelated components of structure, process or outcome. (Bryant-Lukosius & DiCenso 2004, Donabedian 2005)

Valvira = National Supervisory Authority for Welfare and Health
CNS = clinical nurse specialist

The careful role design will inform the forthcoming *role implementation*, for which central phases are informing and committing the stakeholders, introducing new role, and supporting performance. The newly established roles need to be advocated to increase visibility and enhance the future utilization of the roles. The organization and stakeholders must be devoted in all levels and coaxed to cooperation to support the role introduction. This is ensured by close collaboration and participation during the each CNS implementation step. In enforcing the new role, it needs to be ensured that the role is linked closely to clinical nursing, thus impacting on generally identified CNS goals, namely improving and ensuring quality care, implementing EBP, developing nursing practice and staff competencies, supporting staff, corroborating organizations' strategic work, and retaining the expertise in the clinical surroundings. To confirm role achievement, the resources for role implementation and CNSs continuous education affirming competency and possibilities for networking need to be ensured. Additionally an essential prerequisite of role achievement is the support provided for the practitioner; this includes a well-established orientation process, mentoring, managing of barriers, and firm support, especially from managers. Well designed support mechanisms are keys to successful role implementation.

The final phase of the CNS role implementation and evaluation process is *the role evaluation*. Firstly the measured object(s) should have been initially determined in the role design phase which are then further amplified in this final phase. The evaluation might include the structure, process or outcome components in the spheres of patient, nursing, organization, or scholarship. Secondly, the instruments measuring these components need to be selected (if not selected in role design phase), gathered data analyzed and appraised, and the results reported. To finalize the evaluation process, recommendations for future role design, introduction, and evaluation are offered by appraising and disseminating the results, thus the role goal and design will be revisited based on the comprehensive role evaluation.

Based on the narrative analysis a generic CNS definition is articulated as follows: *Clinical nurse specialist (CNS) is an advanced practice nursing role.* A *CNS is an experienced, independent practitioner whose role includes advanced responsibilities, specialization and expanded practice. The CNS's central focus of practice is advanced clinical nursing. The primary practice goal is to ensure*

and improve the quality of clinical care, support staff and multidisciplinary teams in clinical care provision, endorse organizations' clinical performance, and foster the advancement of clinical nursing through scholarship. To achieve the role expectations, CNSs need clinical knowledge and skills beyond the level of front-line nursing attained through prior nursing experience and a minimum of master's level education. These advanced level skills are utilized, in direct and indirect patient care activities through EBP and close collaboration with various stakeholders to accomplish CNS role domains of advanced clinical practice, practice development, education, consultation, leadership and research. Additionally CNSs have comprehensive vision and knowledge of the health care system which they apply to guide and develop clinical nursing practice when working in collaboration with multidisciplinary teams in primary or secondary health care at the unit, clinic or organizational level. CNSs may be flexible in their working patterns, deciding on the focus of domains and spheres based on organizational needs, set goals, and skills of the individual practitioner, however, involvement in each is required to effectively achieve the role requirements. Effectiveness of CNS interventions may be observed from various viewpoints such as patient, staff, nursing or organization, through interrelated components of structure, process or outcome. To show effectiveness is necessary to strengthen the role rationale. Through well-defined roles and areas of clinical responsibility in combination with adequate support mechanisms and policies to guide the practice, the CNS can achieve the role requirements benefiting ultimately the patients, nurses, nursing practice and scholarship, and organizations as well as the community at large.

The formulated *CNS role conceptualization, implementation, and evaluation framework* will provide a foundation for upcoming practical applications, re-examination of current roles, competency descriptions, curriculum design, policy development, as well as for future research of the national CNS posts. Hence it contributes to the operationalization and standardization of the roles, making cohesive role development, implementation and evaluation possible. The formulated framework can be utilized nationally to develop APN roles, thus reforming health care services to better respond to contemporary health care demands. The results may be adapted to the international context as the framework is neither distinguished nor restricted by national features only.

The *CNS role conceptualization, implementation, and evaluation framework* may be further developed and elaborated on. In doing this the various components depicted in the framework need to be explored and verified, the implementation process conducted and possible enhancements indicated to improve the framework's comprehensiveness and ability to describe and explain the CNS practice. The framework may also be compared to previous frameworks or models of CNS roles and further suggestions for amendments proposed. Additionally the distinguishing features, domains, and spheres of practice may be queried from CNS, managers, or patients, or observed in practice to identify their existence, extend, and further reinforce their relationships with each other. The proposed CNS competencies may be used to build curriculum designs and to explicate role requirements, as well as to indicate and measure CNS competency levels, however, more work is needed to further assess and validate these competency descriptions. Finally the evaluation process may be identified from existing literature and practice and so reinforce or challenge the proposed evaluation description.

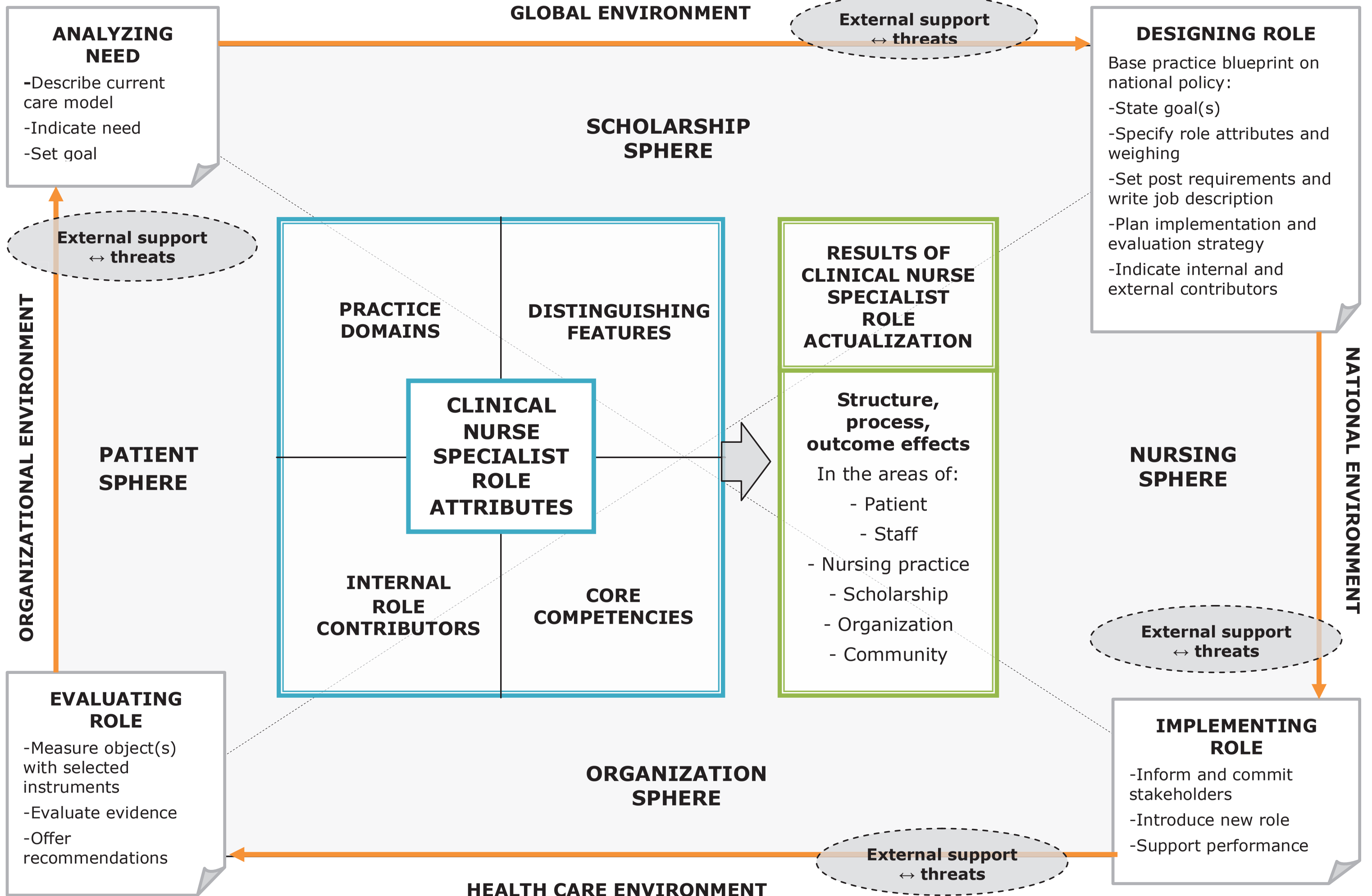

Figure 7. Clinical nurse specialist role conceptualization, implementation, and evaluation framework

6 Discussion

Recent years have seen a time of great flux in nursing roles internationally and nationally. When examining the literature on APN it can be seen that the international evolution of these roles and related concepts has been long and complex. The APN roles, such as CNS, are a rather recent development in Finnish health care, thus the concepts, attributes and policies to guide the role development and implementation are undeveloped. Current study is the first nationwide study investigating APN roles, such as CNS, within Finnish health care. Earlier national studies have explored labor division (Hukkanen & Vallimies-Patomäki 2005), clinical nurse science specialist roles (Korhonen 2008), local APN roles (Fagerström 2009, Fagerström & Glasberg 2011, Nieminen 2011), or criteria and grounds for appointing a CNS (Vestman 2013). In comparison to earlier national studies this study provides more comprehensive CNS role delineation than before. The new information produced in this study enabled the formation of CNS role conceptualization, implementation, and evaluation framework. This framework will aid national role standardization facilitating cohesive CNS role development and implementation; in addition it may inform the formation of national policy and regulation. Furthermore the framework has congruencies with the four basic metaparadigms of nursing, i.e. human beings, environment, health, and nursing, (Fawcett 1984) and can be therefore seen as strongly rooted in the nursing paradigms. Identifying and incorporating nursing's unique ontological and epistemological perspective into APN is a priority, thus lack of focus on own distinguished paradigms may lead to adopting practice values of other disciplines (Arslanian-Engoren et al. 2005).

The inductive study approach combined with wide ranging literature on international CNS roles aid the grounding of current CNS role delineation into the international as well as the Finnish context. Although tangible APN description may not be achievable, the description and agreement on the use of core characteristics is desirable, unifying and assisting in the communication, development, implementation, and discussion of these roles (Bryant-Lukosius et al. 2004, Ruel & Motyka 2009, Spross & Lawson 2013). This study finding of lack of consistent understanding and agreement of APN roles is aligned with earlier studies (Daly & Carnwell 2003, Jones 2005, Vaughan et al. 2005, Abbott 2007, Humphreys et al. 2007, Mantzoukas & Watkinson 2007, Fagerström 2009, Delamaire & Lafortune 2010, Dowling et al. 2013, Hutchinson 2014). Confusion and ambiguity regarding the APN roles (Furlong & Smith 2005, Gardner, Chang & Duffield 2007, Mantzoukas & Watkinson 2007) affect not only the nursing profession, but patients and other stakeholders (Barton, Bevan & Moone 2012). Understanding what advanced practice nurses, such as CNS, are and do, what the similarities and differences are among these practitioners, and how they contribute to accessible and effective care is, however, central to the design and redesign of any health care system (Spross & Lawson 2013), furthermore there is delimited evidence about the successful implementation of these roles within health care settings (Sangster-Gormley, Martin-Misener & Burge 2013). These notions demonstrate a further need for studies, such as the present one, to continue to clarify and unify APN practice especially in the national context. In the next section the most salient issues of APN roles and their implementation will be addressed and discussed further.

6.1 DISCUSSION OF THE FINDINGS

6.1.1 Clinical nurse specialist scope of practice

As APN roles, on the whole, are in their early developmental stage in Finland, thus it is important to describe and clarify the emerging practice attributes. According to this study, the Finnish CNS role is rather consistent with the international role (Lewandowski & Adamle 2009, Oddsdóttir & Sveinsdóttir 2011, Gordon, Lorilla & Lehman 2012, Kilpatrick et al. 2013, Dowling et al. 2013). The Finnish CNSs are independent, experienced practitioners, with a minimum of master's level education and advanced skills utilized to achieve a wide scope of practice. The observation of patient, nursing, and organization practice spheres is supported by earlier statements (NACNS 2004, Lewandowski & Adamle 2009, American Nurses Association 2010). A new finding of this study is, however, the recognition of a scholarship sphere as a distinctive CNS practice area. Within this scholarly sphere, the CNS operates in two ways: firstly they corroborate EBP thus bringing nursing science to the bedside, and secondly they have firsthand access to nursing queries, thus they convey nursing issues from front-line nursing to their own research or joint research with stakeholders. In both instances the CNS induces the progress of nursing and nursing science, thus becoming an invaluable asset in advancing nursing scholarship.

To achieve the role sphere requirements, CNSs act in advanced clinical practice, practice development, education, consultation, leadership and research; however, the finding of disparity of weighting between the domains is in line with international studies (Manley 1997, Vaughan et al. 2005, Humphreys et al. 2007, Mitchell. et al. 2010). Within this study the two role domains causing most debate and controversy were the advanced clinical practice and leadership. As the central focus of the role should be advanced clinical nursing (Hanson & Hamric 2003, Bryant-Lukosius & DiCenso 2004, Redwood et al. 2007, Jinks & Chalder 2007) it is imperative that CNSs remain within close proximity of clinical surroundings. Nevertheless the findings from this study reflect the practicing Finnish CNSs' difficulties to comprehend and master the advanced clinical practice domain, with over half of the interviewed CNSs spending no time in direct clinical practice. In addition to the practicing CNS the expert panelists also disputed this matter with highly polarized opinions throughout the policy Delphi study. The international literature, nevertheless, recognizes CNSs allocating up to half of working time to direct patient care (Jinks & Chalder 2007, Darmody 2005, Charters et al. 2005, Humphreys et al. 2007), although diminished participation in direct clinical work has been noted by some researchers (Dawson & Coombs 2008, Lewandowski & Adamle 2009). This diminishing investment has been, however, claimed to affect and pose a risk to the effectiveness of these practitioners (Lewandowski & Adamle 2009, Bryant-Lukosius et al. 2010). In order to continue to have a strong effect on cost-effective quality care, the CNS will need to impact strongly and directly to clinical care of patients, as meant by the original role priority. Additionally if the central focus of CNS practice is not advanced clinical practice, the role in question is not an APN role and should be therefore designated by some other title than CNS. The notion of conserving the advanced clinical practice as a CNS domain was supported by few of the policy Delphi's expert panelists. Their rationalization on behalf of clinical responsibilities included preserving the core competencies in advanced clinical practice and securing an internationally consistent role scope. In addition to being the core of CNS practice, advanced clinical nursing has been noted to offer possibilities to manage the leadership aspect of the role (Charters et al. 2005, Fairley & Closs 2006, O'Baugh et al. 2007, Baldwin et al. 2009, Elliott 2013), the other major CNS domain causing debate in Finland according to the present study.

Although leadership and leadership skills are repeatedly noted to be essential in implementing APN roles, the notion of leadership was regarded with ambiguity within this study (Dowling et al. 2013). The mixing of leadership and management roles may be one aspect possibly causing debate over leadership role; however, leadership and management are not the same thing, and not even closely related (Kotter 1990). On the whole, visionary leadership abilities have been internationally recognized as an important feature of advanced practice nurses, sometimes even the reason for employment. Advanced practice nurses in general are well placed to provide leadership at both strategic and clinical levels (Manley et al. 2008, Jinks & Chalder 2007) utilizing visionary leadership skills when implementing change (Furlong & Smith 2005, Manley 2000, Jinks & Chalder 2007, Redwood et al. 2007) and anticipating the future (Redwood et al. 2007, O'Baugh et al. 2007). Additionally it has been argued that there is increased need for expert leadership provided by advanced practice nurses at the bedside with increased patient acuity, decreased hospital stay, and expanded scientific knowledge (Lewandowski & Adamle 2009, Cronenwett 2012). Furthermore nurse managers' increased managerial responsibilities have led them away from clinical surroundings, thus further increasing the void of clinical leadership in clinical settings (McWhirter & Scholes 2009, Shirey, Ebright & McDaniel 2008). Based on these major notions it is imperative that the Finnish CNS's leadership role will be strengthened to support staff and effective CNS role achievement. It needs to be acknowledged that although the leadership role is essentially embedded in several domains, being a leader in advanced nursing practice is challenging and multifaceted and can be overwhelming to a single individual, particularly those new to the role or those who do not have effective support mechanisms (Elliott 2013). To facilitate the establishment of the leadership domain, it needs to be conceptualized further by future study and well supported to ascertain role actualization.

Lastly, although the right to prescribe medication did not surface visibly in this study, it is most definitely one feature of nurses working in advanced practice roles. The number of countries where nurses are legally permitted to prescribe medicines has grown considerably in recent years; however, actual practices and forces leading to prescribing vary considerably between countries (Pulcini et al. 2010, Delamaire & Lafortune 2010, Kroezen 2012). Although nurse prescribing may be faced with many hurdles, it is worth pursuing, thus nurse prescribing benefits patients as well as the nursing practice and profession in many ways (Blanchflower 2013, Kroezen 2014). It has been suggested that to foster successful implementation of nurse prescribing in practice, it may be beneficial to apply a stepwise implementation of nurse prescribing (Kroezen 2012). In Finland the law enabled nurse prescribing from a limited formulary in 2010 (MSAH), however, nurse prescribing is not limited to advanced practice nurse roles. As the nurse prescribing related to APN roles within Finland is still in its early phases, it requires further examination.

In summary the CNS scope of practice is clearly multifaceted and novel and therefore still embodies ambiguous features requiring further clarification. The newly formed core competency descriptions offer a means to foster the amplification of scope of national CNS practice. They detail the CNS competencies from the patient, nursing, organization, and scholarship perspectives; however, extensive further work is needed to measure the content validity of the individual items and the overall scale (Polit & Beck 2006).

6.1.2 Factors hindering successful clinical nurse specialist role achievement and implementation

The sub-study results on factors hindering CNS role implementation were consistent and reinforced each other. Several internal barriers and external threats were recognized as hampering role achievement. In addition current variety in titles, definition, scope of practice, and preparation for roles appears to have caused, and are furthermore expected to continue to cause, confusion among consumers, nursing and other disciplines, with earlier studies reporting similar results (McFadden & Miller 1994, Jones 2005, Woodward, Webb & Prowse 2005, Glover et al. 2006, Mantzoukas & Watkinson 2007, Humphreys et al. 2007, Lewandowski & Adamle 2009, Delamaire & Lafortune 2010, Sangster-Gormley et al. 2011).

The tight economic situation was seen as a source of concern in Finland, thus the lack of funds may cause a situation where these roles are not implemented. This finding is in line with earlier national studies on APN roles (Korhonen 2008). As health care resources are scarce, municipalities need to do their health care renovations by redirecting existing resources and by developing more effective health policies and services (MSAH 2009a). Based on this notion the resources to implement APN roles need to be found among existing reserves, hence close scrutiny of possibilities to rearrange the workforce resources is needed. It needs to be considered how the various existing advanced roles of nursing, such as nurse managers, assistant nurse managers, and clinical educators, could be expediently utilized to work in juxtaposition and complement each other, hence contributing to effective management of clinical nursing. Modification and rearranging of existing roles, resources, and competencies to ensure the effective care delivery is needed, however. It is imperative that these innovative APN roles are secured to ensure these practitioners' cost effective contribution to patients, nursing, organization and health care in general.

In addition the dual model of CNS education was recognized as a major concern by the national sub-studies. Deficiencies of educational preparation, especially a lack of preceptorship and possibilities for continuous education were recognized in this study. On the whole the disparity with the dual educational system was noted to cause challenges for cohesive curriculum development, thus contributing to practitioners' preparation with extremely varying baseline competencies. Although a master's degree appears to be the generally accepted form of education required for CNS roles within Finland, as it is internationally (Sheer & Wong 2008, Pulcini et al. 2010, Delamaire & Lafortune 2010), there is no national policy in place to support and unify this prerequisite nor the content of the curriculum. While international programs of APN include a substantial amount of clinical practice with a preceptorship in an APN role, courses in advanced pathophysiology, advanced pharmacology, and health assessment, as well as courses in medical diagnosis and management, APN role, nursing theory, research, and EBP (American Nurses Association 2010, Gordon, Lorilla & Lehman 2012), many of these are not rigorously included in the existing Finnish APN curriculum. It remains to be seen how reforming the Finnish educational system will affect the APN education in the near future, however, based on the findings of this study it is recommended that the University and Polytechnic institution APN curriculums be clarified, by either clearly specifying or integrating them. In addition, it might be feasible that these educations would prepare practitioners for different types of APN roles.

In conclusion while advanced practice nurses, like CNSs, have great potential for high-quality, evidence-based practice service delivery (Gordon, Lorilla & Lehman 2012), they often nevertheless, struggle with multiple challenges affecting successful role achievement, while implementation of these roles is far from axiomatic. Additionally the study revealed

interrelated barriers hindering and factors facilitating role implementation, hence impacting current role achievement, as well as future development of the role, a finding also supported by studies such as Jones (2005) and Sangster-Gormley et al. (2011). To cope with role barriers the advanced practitioners utilize facilitating factors, thus the strategies facilitating role implementation and factors hindering role actualization should be recognized and addressed for more effective role utilization. Furthermore many of the role barriers could be prevented or minimized by comprehensive role design and subsequent role introduction (Bryant-Lukosius et al. 2004). Nevertheless in many countries the absence of supportive policies and regulation has led to insufficiently designed role introduction (Bryant-Lukosius et al. 2004, Furlong & Smith 2005). With an absence of policies to support role implementation and without careful consideration of the factors hindering role achievement the benefits of this post will surely be hampered.

6.1.3 Enhancing successful implementation of new advanced practice nursing roles

Successfully implementing APN roles into practice settings is a complex process (Bryant-Lukosius & DiCenso 2004, Sangster-Gormley et al. 2011), however, this study recognized several factors as contributing positively to successful role implementation and evaluation. Close collaboration between various stakeholders such as nurses, educators, nurse directors, physicians, researchers, and politicians, and particularly support from nursing managers is required to successfully establish any APN role was a finding in line with several international studies (McFadden & Miller 1994, Jones 2005, Sangster-Gormley et al. 2011, Weaver Moore & Leahy 2012, Sangster-Gormley, Martin-Misener & Burge 2013).

The present study notion of a basic need to agree on the core role attributes was concurrent with earlier studies (Hanson & Hamric 2003, Bryant-Lukosius et al. 2004, Jones 2005, Mantzoukas & Watkinson 2007, Ruel & Motyka 2009). Jointly agreed role attributes will help policy makers to define role and competencies, educators develop curricula, and people to understand what the advanced practice nurse, such as CNS, is and does, thus assisting consistent understanding and role evolution (Ketefian et al. 2001, Daly & Carnwell 2003, Glover et al. 2006, Humphreys et al. 2007, Mantzoukas & Watkinson 2007, Lewandowski & Adamle 2009). Structures facilitating formation of joint views on APN roles, such as frameworks and career structures, will enable the practitioners and their organizations to better understand their practice. However, the lack of a national career ladder segregating different levels of roles was identified in this study, and a need for such also recognized. The career structures to support the APN role implementation have also been noted as important by the study of Jones (2005) as well as Barton and colleagues (2012) with the notion of lack of career structures possibly leading to forces, outside of the nursing profession, driving role development and utilization. As Finland has a long history of fragmentation of education and practice into career ladder types of system, it might be feasible to continue this way and introduce the APN roles as a part of career ladder. This ladder could follow the emerging suggestion: a) Advanced practice nurse (MSc) such as clinical nurse specialist, b) Doctor of clinical nursing science (PhD), and c) Associate professor of clinical nursing science, and d) Professor of clinical nursing science. All of the career ladder steps for each role need to be carefully defined and the educational requirements and curriculum content designed following the identification of distinguishing competency descriptions.

Furthermore new nursing role implementation is facilitated by clear processes thus role implementation has been found to be no easy task (Sangster-Gormley et al. 2011, Weaver Moore & Leahy 2012), hence the paucity of and subsequent need for research to support successful implementation of APN roles (Bryant-Lukosius et al. 2010, Delamaire &

Lafortune 2010). The presented implementation steps will offer a base for consistent role implementation drawing attention to continuous phases of establishing, engaging, and securing the role, thus facilitating comprehensive role implementation and evaluation. Careful planning of implementation strategies will help in creating conditions necessary to support role development and integration (Bryant-Lukosius & DiCenso 2004), thus well designed roles and careful introduction and evaluation will encourage prosperity of these practitioners.

The wide-ranging benefits associated with CNS and other APN roles warrant the implementation of these roles, yet in order to strengthen the CNS evidence base, role establishment and achievement needs to be evaluated. Establishing a baseline before any change or new practice will give a basis for comparison so that a data-driven evaluation can be made (Urden 1999). A key question of interest is how to justify the cost of APN since cost-effectiveness is often an intangible, difficult-to-measure benefit (Gordon, Lorilla & Lehman 2012). If decision-maker uncertainty about role benefits persists, these roles will remain vulnerable to cutbacks (Lewandowski & Adamle 2009, Bryant-Lukosius et al. 2010). Besides indicating role achievement, the evaluation demonstrates developmental needs leading to future orientation. Deficiencies in consistent role measurement of APN roles were, however, highlighted by this study. The uniform gathering and screening of evidence was recognized to be influenced by the lack of measurement instruments, procedures, and knowledge about them, a finding also supported by earlier studies (Bryant-Lukosius et al. 2010, Brooten et al. 2012). Therefore CNSs and nurse managers must identify the outcomes that matter most and ones where a difference can be made. After determining the object and content of evaluation a careful selection of instruments is the most crucial step; considerable work may be needed to find specific ones (Urden 1999, Brooten et al. 2004, Gordon, Lorilla & Lehman 2012). While outcomes remain the ultimate validator of effectiveness and quality of care, the examination of the care process itself, to assess whether quality care has been applied, and the assessment of structure applied to the examination of settings in which care takes place, is also imperative (Donabedian 2005). The futuristic approach and mastering of nursing practice as originally blueprinted will offer advanced practice nurses a strong foundation for future role positioning.

Finally frameworks to organize role attributes are needed. Hence the introduced CNS role conceptualization, implementation, and evaluation framework will assist in the consistent development, implementation and evaluation of APN roles in Finland. Despite its preliminary character the framework will inform the nursing profession, educators, health care leaders, and other stakeholders about the central CNS attributes, competencies, and effective role design, introduction and evaluation methods. As the focus of the study design lay in specialist health care, the results may be generalizable in these environments; however, if the results were to be used to implement CNS roles in a primary health care setting a consideration must be given to assess the transferability and generalizability of the provided framework in these environments. Additionally it is acknowledged that this study has examined only the national CNS role and its related international roles. With deliberation the results may be useful in developing other APN roles such as NP or NM; however, in the main the framework will facilitate the cohesive conceptualization and standardization of the national CNS role. To confirm the level of transferability the results need to be applied in new health care settings.

6.1.4 The clinical nurse specialist role conceptualization, implementation and evaluation, framework in light of former frameworks

In order to explore the current Finnish CNS phenomenon without preconception an inductive approach was used to obtain evidence on contemporary national CNS role attributes and role delineation. Therefore, a conceptual or theoretical framework was not used to situate the CNS role delineation attempts with existing frameworks, although several frameworks exist (Brown 1998, Hamric & Spross 1989, Bryant-Lukosius & DiCenso 2004, De Geest 2008). Although no theoretical framework was used, the international literature review constituted a frame for subsequent national CNS role examination.

On the whole, the features depicted in the formulated CNS role conceptualization, implementation, and evaluation, framework are recognizable in earlier APN models (Hamric & Spross 1989, Brown 1998, Bryant-Lukosius & DiCenso 2004, De Geest 2008). Brown's (1998) *framework for advanced practice nursing* integrated and consolidated several sources drawn from the literature. APN attributes such as practice focus domains of activity scope and competencies were recognized, and environments as well as role legitimacy and outcomes defined. The framework does have consistencies with the current framework; however, notable difference occurs in the area of role domains as Brown's framework is less in numbers and terms in specifying CNS role domains. Brown identified advanced clinical practice, management of health care environments, and involvement in broad health care discourse as the domains of an advanced practitioner. Contemporary CNS roles appear to be expanding on the various role domains revealing a possible reason behind overall role shift from clinical practice focus to other advanced activities. As the demands of several domain activity increase, it will inevitably lead to reorganizing of role priority. A fundamental question nevertheless is what are the priority values when designing the APN, such as CNS, role domain weighing.

Bryant -Lukosius and DiCenso (2004) recognized the need for an APN specific framework to address role implementation issues. Based on previous literature they developed *the participatory, evidence-base patient-centered process for APN role development, implementation, and evaluation (PEPPA) framework*. The framework delineates the APN implementation process in great detail with closely prescribed steps. It addresses and contemplates these processes in much more detail than the current framework; however, effective implementation steps such as identifying needs and goals of new care models, planning of implementation strategies, engaging in role implementation, and evaluating role outcomes were also recognized by the expert panelist in the current study. Compared to the PEPPA framework the current framework is, however, more comprehensive with regard to the prescribing of role attributes of contemporary CNS practice.

A unique feature of the current CNS role conceptualization, implementation, and evaluation framework is its combining of vast international literature and multiple national empirical research findings thus enabling comprehensive narration of the studied phenomenon. Additionally, the framework provides an extensive depiction of both implementation and CNS role attributes and therefore offers a means to examine these roles from multiple perspectives. The inductive empirical approach in formulating the current framework and, yet, consistencies with prior frameworks can be regarded as a strength. Although, on the other hand, omitting the use of previous framework may also be seen as a limitation, as an existing framework could have helped to guide the rationale and structure of the overall study.

6.2 ETHICAL CONSIDERATIONS

Ethical considerations are integral in sciences that explore human behavior and use humans as sources. There was no direct patient involvement in any of the original studies that

involved health care workers as delegates of their profession. Ethical issues within this study involved thorough, good practice of science, ethicality of the methods, participant autonomy, avoiding damage, anonymity and confidentiality, therefore the study is ethically justified. However, there is very scarce national research on APN roles, although the subject is well studied in some countries. (Brock et al. 2002, Leino-Kilpi 2003, Kjellström, Ross & Fridlund 2010.)

Good practice of science was approached through honesty, thoroughness and accuracy in all research phases. The study was carefully designed, comprehensive answers to the study questions were sought and analyses conducted by utilizing the whole dataset, after which results were reported truthfully. Each sub-study stage was documented and described carefully to allow quality assessment of the processes taken (Brock et al. 2002, Leino-Kilpi 2003, Finnish Advisory Board on Research Integrity 2012). Finally, audio, manual and IT data were filed, stored and disposed of according to the instructions of the University of Eastern Finland (Brock et al. 2002).

All of the sub-studies were carried out in accordance with The Code of Ethics of the World Medical Association (2013) and all procedures were performed in compliance with relevant laws and institutional guidelines. The study approvals were sought from the participating organizations' research committees in sub-studies two and three. An ethical evaluation was sought only for sub-study two from the University of Eastern Finland Committee on Research Ethics (statement number 9/2011), which involved more in-depth participant views sought in face to face interviews (Brock et al. 2002, Leino-Kilpi 2003). According to Finnish law (Medical Research Act 1999/488, 2004/295, 2010/794) and national ethical guidelines (2009), there was no need for ethical approval for the sub-studies one and three.

Prior to the studies, participants were sent a cover letter informing them about the study and in sub-study two they were asked to sign an informed consent form. In sub-study three responding to the survey was regarded as giving informed consent. Participants were treated with appreciation, and the results were published truthfully, illustrating and honoring different views. Additionally participant autonomy, avoiding damage, anonymity, and confidentiality were taken into account in all of the study phases. Policy Delphi study processes include anonymity of the responses (de Loe, 1995; Keeney et al., 2006), to allow participants an equal voice and hearing without perceived pressure from senior colleagues (de Loe, 1995); however, the participation in the policy Delphi study was only partially anonymous thus only quasi-anonymity of responses could be guaranteed in the sense that the respondents and their responses were known to the research team (Keeney, Hasson & McKenna 2006). Panelists were provided reassurance that their individual responses would be protected with an unidentifiable format during the study. Participation in all sub-studies was voluntary and participants could withdraw from the study at any time with no consequences (Brock et al. 2002).

6.3 VALIDITY OF THE RESEARCH

In this study the basic strategies of systematic, self-conscious study design, data collection, interpretation, and communication, highlighted by Mays and Pope (2000) to address the issue of rigor and quality, were used. Additionally the basic issues of credibility, transferability, dependability, and conformability were taken into account when considering the criteria for qualitative data, and goals of validity and reliability were addressed to enhance quantitative data quality (O'Cathain 2010).

On the whole to address the above mentioned quality indicators systematic study design and theoretical background were detailed to reveal how the study questions and aims were

explored. The participant/literature selection and description of the processes used were reported to enable readers to assess the diversity of the perspectives included. The data collection settings, content, and participant characteristics were also reported to illuminate the data gathering methods and content, allowing the reader to consider the relevance and scale of the findings. Additionally the analysis process and the study findings were described and examples of the coding process and identification of themes were supplemented. In the reporting of the results, supporting quotations were provided to add transparency and trustworthiness to the findings, data interpretation, and consistency between the data presented and the study findings (Mays & Pope 2000, Tong, Sainsbury & Craig 2007), hence data and findings are open to evaluation and replication, thus incorrect results can be identified, revised or refuted (Tong, Sainsbury & Craig 2007). A close examination of alternative explanations and discussion of elements contradicting the emerging explanations of the phenomena under study were also discussed (Mays & Pope 2000), however, text always involves multiple meanings and therefore understanding is dependent on subjective interpretations (Graneheim & Lundman 2004). To reach the study objectives the study design and methods chosen were found appropriate. Furthermore, the study design, data gathering, analysis processes, and reporting were supported by the stability of the research team.

The systematic literature review followed a predetermined review protocol to ensure the rigor of the process. The steps of the review process were documented closely to allow for the assessment of the credibility, transferability, dependability, and conformability of the review. The articles were chosen based on strict inclusion criteria, assuring systematic intake of research papers discussing the investigated phenomenon. One APN role in three different countries was selected to be explored. The rationale of this was to select APN roles that were similar with respect to their level of practice; however, differences in titling, within and between countries, caused difficulties in selection of roles for review. The studies selected for the review were appraised on relevance, with the aim of acquiring an in-depth understanding of the phenomenon. Due to the relatively small numbers of articles meeting the inclusion criteria, none were excluded based on context, sampling, or quality of the methodology.

As APN roles are new to Finnish health care it was important at this point to get an indigenous description of the phenomenon. A descriptive qualitative study was selected for its ability to effectively examine and produce descriptions of new health care roles (Sandelowski 2000, Kelly 2010). Nevertheless a qualitative interview study limitation could be the small number of informants, although this is common in qualitative studies (Sandelowski 2000). A level of data saturation was, however, achieved during the analysis of the interviews as no new themes, findings, concepts, or problems were evident in the data. Because of the small number of possible participants, there was no need for a structured method for data saturation. (See i.e. Francis et al. 2010.) A further limitation could be that the data collection method included only interviews and no other information was gathered to support the findings in sub-study two (Kelly 2010). However, vivid narratives of CNS roles were obtained which enabled exploration and description of the current CNS role within Finnish health care. Although the informants did not represent all university hospitals they worked in various specialty areas and hence the results may be generalizable especially in hospital care or acute care environments. Internationally the results may not be transferable as a whole but will offer a point of reference or comparison to other nations, especially those in early phases of CNS role development. To increase the validity of the study, data collection procedures, participant characteristics, analysis process, and the findings were described carefully to allow the reader to consider the relevance and scale of the findings (Tong, Sainsbury & Craig 2007). To promote quality of study reporting the Consolidated Criteria for Reporting Qualitative Research (COREQ) 32-item checklist was adopted (Tong,

Sainsbury & Craig 2007) to assure the structures of effective reporting. This list includes points to be discussed such as; study design, sampling method, data collection settings, method of data collection, analysis and reporting, description of the derivation of themes, identification of themes, and inclusion of supporting quotations.

To increase the validity of the policy Delphi study an attempt was made to achieve a true and diverse expert panel to represent broad knowledge and points of view. This diversity and breadth of expertise increases confidence in the validity of the results. Additionally policy Delphi uses partial respondent validation as the data produced by the participants and analyzed by the researcher is fed back several times for comment and further scrutiny (Mays & Pope 2000) thus increasing the validity of the analysis process. Since the aim of the Delphi method is to generate ideas and hypotheses, not to test them, a single Delphi study may not be replicable and hence, the body of knowledge about a topic could be regarded as cumulative (Mead & Moseley 2001). The formulation of questionnaires and statements as well as comprehension of the reasons behind the arguments and ratings is a difficult task; hence, the results may have been interpreted differently if another researcher had carried out the analysis. The analysis process and questionnaire formulation were discussed within a research team to increase the validity of these processes and a clear account of the processes used within the data collection and analysis were also described in detail to help the reader to assess the steps taken (Mays & Pope 2000). As response exhaustion is a commonly recognized issue in Delphi studies (McKenna 1994) the final response rate of 54% is both adequate and comparable with other policy Delphi study (O'Loughlin 2004, Picavet, Cassiman & Simoens 2012). Based on the drop out analysis it may be noted that many of the originally recommended participants who did not choose to participate in the study (n=10) were health care managers or APN educators, therefore this may be due to time constraints or perceived lack of familiarity with the study phenomenon. Between first and third Delphi rounds the number of drop outs was only 6, with even distribution between various interest groups.

The *CNS conceptualization, implementation, and evaluation framework* is formulated based on careful scrutiny and analyses of original studies presented in this thesis. The results from the three sub-studies were compared and integrated to look for patterns of divergence and convergence, leading to an overall interpretation of the results. The combining of several study methods ensured comprehensiveness and reflexive analysis of data thus assuring the validity of the produced framework. Due to triangulation of study methods and data the formulated framework is firmly based in literature as well as in national CNS role.

A part of assessment of reliability is the consideration of relevance. This study can be seen as highly relevant from the points of view of Finnish nursing, nurse education, nursing research, and management. It adds to the still meager APN knowledge base in Finland. Findings have been synthesized from several sub-studies, national and international, and abstracted to enable generalizability of results to Finnish and international contexts (see, i.e. Pope, Ziebland & Mays 2000).

7 Summary and conclusions

The study findings portray the multifaceted CNS role within international and Finnish contexts by illustrating the core practice attributes, role challenges and facilitators, competency descriptions, future visions and threats to the national role implementation and development. The findings of the three sub-studies were integrated for the purpose of constructing the *CNS role conceptualization, implementation, and evaluation framework*. The developed framework offers a basis for benchmarking, operationalization and standardization of these roles within Finnish health care, however, more work is needed to further develop the CNS competency descriptions and subsequent educational curriculum as well as to elaborate on the role domains and their conceptualization. The CNS role conceptualization, implementation, and evaluation framework will aid with upcoming practical applications, re-examination of current roles, and policy development aspirations, as well as provide directions for future research agendas. It may also provide a point of reference for the development and implementation process of other APN roles such as nurse practitioner or nurse midwife. Furthermore the framework will form a basis for the CNS model construction process, thus empirical study of its applicability to and efficacy in practice needs to be performed. Further examination and validation of the framework and discussions to foster its future development are invited.

Based on the study findings the following conclusions are drawn:

1. The systematic literature review reveals a vast international literature on APN roles. There are major consistencies in international roles between various countries; nevertheless a need to simplify and unify the core characteristics remains. Nations developing their APN roles need to take into account the global role evolution to facilitate mutual discussions, role comparisons, and the coherent development as well as mobility of health care staff between different countries.
2. CNS roles are widely studied internationally; however there is scarce information to support role development and implementation within Finnish context. National CNS and other APN role conceptualization and standardization is urgently needed, thus jointly agreed APN role attributes will help policy makers to define role and competencies, organizations to implement, assess and expand these roles and work conditions cohesively, educators to develop curricula, scholars to plan research agendas, and people to understand what the CNS is and does.
3. This study reveals CNSs utilizing advanced competency and skills in the spheres of patient, nursing, organizational and scholarship to achieve role requirements. Based on the study results, the international and national roles are generally consistent although divergences also exist. Furthermore the practicing CNS and nationwide policy Delphi expert panelists' views on the CNS role were consistent. Further work is nevertheless required to formulate national policy and regulation of APN roles to steer consistent role development, implementation and standardization. The forming of national policy to support role implementation should be conducted together with central stakeholders to enable the formation of rapport thus ensuring future role prosperity.

4. The APN role implementation will face many hurdles threatening to hamper the successful role introduction and actualization. The hindering and facilitating factors are interwoven, influencing each other. Several role facilitators and adequate organizational support mechanisms will assist the CNS to overcome the challenges of the role. The recognized phases of designing, introducing and evaluating the role may foster successful role implementation.
5. This study and the presented CNS role conceptualization, implementation, and evaluation framework offer a baseline for benchmarking and development of the national APN roles, and will in time, be amended and elaborated on. The proposed framework forms a construct which needs to be discussed and analyzed further, however, it serves as a valuable foundation for understanding, applying, researching and developing APN concepts, and should be useful in promoting the coherent implementation of CNS roles within Finnish health care settings.

Suggestions for further research:

- To conceptualize the various CNS domains especially the advanced clinical practice and leadership.
- To elaborate on effective, cohesive measurement methods for CNS practice outcomes and form a baseline scheme for initial national outcome measurement.
- To examine and compare the university and polytechnic institution curricula and to explore the combining or segregation of these educational forms.
- To validate the preliminary core competency descriptions produced in this study.
- To conceptualize and differentiate various APN roles within Finnish context.
- To further develop and validate the proposed CNS role conceptualization, implementation, and evaluation framework, to produce empirical evidence on its applicability to and descriptiveness in practice.

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APPENDIX I-III

Table 10. Definition of central concepts **Appendix I**

Term	Definition by Oxford dictionary	Conceptual definition
Advanced	far on or ahead in development or progress	-
Advanced knowledge	-	Involves the ability to use research findings, theory, and practical knowledge in clinical reasoning and to integrate research findings and theoretical explanations into practice. (Brown 1998)
Advanced nursing practice	-	Advanced nursing practice refers to the *work*, or what APNs *do* in the role, and includes role domains and competencies. (Ruel & Motyka 2009)
Advanced practice nursing	-	Advanced practice nursing encompasses the discipline, environments, society, and stakeholders, roles, resources, structures, profession, and advanced nursing practice. It is mostly seen as a heterogeneous set of multiple roles, sub-roles, and competencies with blurred boundaries. (Ruel & Motyka 2009)
Advanced practice registered nurse (APRN)	-	"APRN is a nurse who has completed graduate-level education, has passed a national certification, maintains continued competence and is licensed to practice as an APRN." (American Nurses Association 2010)
Advanced practice nursing (APN) roles	-	APN sub-roles, such as clinical nurse specialist, are distinctive roles with varying scope of practice. Practice requirements include minimum education at master's level and activity in advanced practice nursing domains. (Hanson, Hamric 2003)
Autonomy	Freedom from external control or influence	Is a condition of practice that allows a group of health care practitioners to practice independently within their legitimately recognized scope of practice. (Brown 1998)
Competency	the ability to do something successfully or efficiently	Competencies are the profile of health care capabilities required by practitioners to deliver and influence quality health care. Some APN competencies are required and employed in all advanced practice roles (core competencies) other are used more in one APN role tan in another. (Brown 1998)
Domain	a specified sphere of activity or knowledge	-
Extension	a part that is added to something to enlarge or prolong it	Extension of a nursing role refers to the inclusion of a particular skill or area of practice responsibility that was not previously associated with the nurse's role. (Dally & Carnwell 2003)
Expansion	the action of becoming larger or more extensive	Role expansion imply that the core elements of nursing practice still apply but that additional skills and areas of practice extending beyond traditional scopes of nursing practice, are encompassed within a specialist role that involves greater responsibility, accountability, and autonomy. (Daly & Carnwell 2003)
Nursing	The profession or practice of providing care for the sic and infirm	Nursing is both an art and a science that requires the understanding and application of the knowledge and skills specific to the discipline. (WHO 2000)
Scope	the extent of the area or subject matter that something deals with or to which it is relevant	Scope of practice is the area of legitimate functioning in particular role. The advanced nursing practice scope is defined by specialization, expansion of services provided, and autonomy. (Brown 1998)
Specialization	concentrate on and become expert in a particular subject or skill	Specialization is concentrating ones practice on part of the whole field of nursing by focusing on a patient population that is defined by a specific factor, such as age, care setting, illness ect. (Brown 1998)

Appendix II

Table 11. The preliminary clinical nurse specialist competency descriptions

Clinical nurse specialist competency description
Patient sphere competencies
• Disseminates EBP best practice guidelines in day to day clinical nursing
• Comprehends systematic and holistic clinical nursing
• Solves concrete problems of nursing through EBP
• Gathers evidence to support clinical decision making
• Acts to strengthen patient safety
• Operates as an ethical role model
• Involves patients in development of nursing procedures
• Possesses comprehensive expertise and experience in the area of own clinical specialty
• Works with multidisciplinary team in close proximity to patient
• Coordinates patient care in own specialty area
• Has the ability to make independent decisions related to patient work
• Leads clinical nursing practice based on evidence-based practice procedures
• Implements evidence-based practice
• Works in expanded nursing role in line with goals and rights appointed
• Acts as a role model in difficult patient situations
• Enacts independent practice
• Acts in direct patient care as a clinical expert
• Works in direct patient work to influence effectiveness
Nursing sphere competencies
• Consults multidisciplinary team giving expert support in complex care situations
• Combines care procedures through collaboration
• Develops care procedures in the area of specialization
• Inspires staff to develop own work
• Acts as liaison person between different units when developing nursing and unified practice
• Develops self and own knowledge base constantly
• Acts through expertise towards increased patient care quality
• Participates in multidisciplinary project design, introduction, and evaluation
• Influences nursing processes via educating staff
• Uses information technology to keep own and team knowledge up to date
• Works in close collaboration with multidisciplinary team
• Sustains nursing appreciation and works toward raising nursing image
• Corroborates unit and multidisciplinary team clinical knowledge
• Works together with staff and multidisciplinary team to develop units
• Expands staff comprehension about processes, service quality and effectiveness
• Develops nursing practice in the area of own specialty
• Mentors nursing staff
• Supports clinical leadership with evidence-based knowledge
• Follows and assesses care chain fluency
• Follows and anticipates care trends and community trends
• Gives constructive feedback to staff
• Teaches and guides multidisciplinary team within own specialty area

(*Table 11*. continued)

Table 11. (continued)

Organization sphere competencies
- Acts to achieve organizational strategy supporting its goals
- Supports decision making concerning practice development
- Acts through expertise towards increased effectiveness
- Builds networks and cooperation between units and organizations
- Operates with organizational management to promote health care development
- Possesses courage and activeness in attending professional tasks
- Positively affects organizational culture
- Possesses wide ranging knowledge of health care services
- Leads the building of transformative culture
- Acts in cooperation with specialist care, secondary care and third sector
- Participates in national and international cooperative projects
- Utilizes discretion to influence work community
- Acts as an expert in own specialty area within organization
- Acts in multidisciplinary networks as nursing representative
- Participates in and leads quality projects
- Follows organizations' incident rates and descriptions

Scholarship sphere competencies
- Implements EBP
- Has special knowledge to lead development projects
- Acts to strengthen EBP
- Possesses strong pedagogical skills
- Disseminates contemporary knowledge to colleagues
- Follows and assesses nursing quality using quality assurance methods
- Guides evidence-based practice implementation and application
- Follows research in own specialist area
- Applies research evidence into nursing practice
- Gathers and analyzes systematically knowledge about nursing methods and effects
- Disseminates and publishes research findings
- Organizes research club activity by advancing reading and applying of research
- Produces evidence-based knowledge from own specialty
- Fosters clinical nursing research
- Conducts clinical nursing research
- Acts in national research groups
- Coordinates clinical research in own specialty area
- Takes part in planning staff education
- Coordinates nursing student supervision

EBP=evidence based practice

Appendix III

Table 12. Suggestions on CNS role measurement methods

Assess the importance of CNS role measurement methods	Ratings on scale (1=very unimportant, 2=unimportant, 3=important, 4=very important)				Consensus	Support	Mean
	1	**2**	**3**	**4**			
Peer reviewing	0	0	9	10	High	SS	3.53
Measuring achievements against goals	0	1	4	14	High	SS	3.68
National validation scales (EBP implementation, patient safety assessment etc.)	0	0	8	11	High	SS	3.58
Measuring of the CNS role intervention outcomes	0	1	7	11	High	SS	3.53
Self evaluation	0	1	10	8	High	SS	3.37
Timeliness of nursing practice guidelines	0	1	5	12	High	SS	3.61
Auditing	0	1	12	5	High	SS	3.22
Feedback on CNS led education	0	2	13	4	High	SS	
Employee, patient, and student feedback	0	2	11	6	High	SS	3.21
Internationally validated nursing specific scales	2	0	8	9	High	SS	3.26
Staff competency mapping pre and post CNS role	0	2	11	5	High	SS	3.17
Feedback from CNS education	0	2	13	4	High	SS	3.11

High consensus=70% of ratings are in 1 category or 80 % in 2 contiguous categories;
Medium consensus=60% of ratings are in 1 category or 70 % in 2 contiguous categories;
Low consensus=50% of ratings are in 1 category or 60% in 2 contiguous categories;
No consensus=< 60% of ratings are in 2 contiguous categories;
SS (strong support)=>75% of ratings on point 3 and 4;
WS (weak support)=50-75% ratings on point 3 and 4;
WO (weak opposition)=50-75% ratings on point 1 and 2
SO (strong opposition)=> 75% of ratings on point 1 and 2

Krista Jokiniemi

Clinical Nurse Specialist Role in Finnish Health Care

Clinical nurse specialist (CNS), a distinguished role of advanced practice nursing, is a global megatrend. CNS positions are novel in Finnish health care. The aim of this study was to describe the role of CNS and to explore the implications for future role development. Consensus on the attributes of the role will help central stakeholders to understand and aid consistent role development. Thereby, a framework for CNS role conceptualization, implementation, and evaluation presented in this study offers a frame of reference for future mapping of these roles.

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