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SUPPORT FOR NURSES' ETHICAL COMPETENCE - ORGANIZATIONAL AND INDIVIDUAL SUPPORT BY NURSE LEADERS

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"Without man and his potential for moral progress, the whole of reality would be a mere wilderness, a thing in vain, and have no final purpose."
Immanuel Kant

ABSTRACT

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SUPPORT FOR NURSES' ETHICAL COMPETENCE − Organizational and individual support by nurse leaders
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Nurse leaders play a vital role in supporting nurses' ethical competence. The first aim of the research underlying this thesis was to analyze of support for nurses' ethical competence from the perspective of both nurses and nurse leaders based on earlier theoretical literature and empirical data. Secondly, the aim was to analyze the relationships between organizational and individual support, and nurses' ethical competence. Furthermore, the relationships between ethical competence, ethical safety and work satisfaction were covered. The ultimate goal was to produce, in the field of professional nursing ethics, knowledge regarding nurse leaders support for nurses' ethical competence, to improve nurses' ethical safety and enhance their work satisfaction.

This research was carried out in two phases. During phase I, four literature reviews in MEDLINE, Ovid Nursing and British Nursing Index databases were conducted to explore knowledge on organizational and individual support for nurses' ethical competence, ethical safety and work satisfaction. Moreover, a cross-sectional survey in two university hospitals in Finland was employed to analyze nurse leaders (N=539, n=198, response rate 37 %) support for nurses' ethical competence during recruitment and performance reviews. Phase II was characterized by the development and testing of the Ethical Competence Support instrument (EthiCS). To analyze the relationships between main concepts, descriptive and cross-sectional correlational survey design was used. Empirical data were retrieved from both nurses (N=1100, n=298, response rate= 26%) and their nurse leaders (N=1100, n=193, response rate= 16%). The data analysis methods used in this study were descriptive and inferential statistics including regression analysis and path analysis and content analysis for open-ended questions.

The results showed that perceptions of organizational support were low among nurses and average among nurse leaders. Nurses reported moderate levels of individual support and nurse leaders at average level. Organizational and individual support was found to directly and positively correlate with nurses' ethical competence. Furthermore, ethical competence was positively correlated with nurses' ethical safety and work satisfaction. Finally, the results showed that nurse leaders can leverage both organizational and individual support to improve nurses' ethical competence, which, in turn, contributes to ethical safety and work satisfaction.

Nurse leaders need to adopt a variety of activities to support nurses' ethical competence, like creation of ethics policy statements, support for multidisciplinary discussion of ethical issues, ethics education, empowering nurses to handle and solve ethical problems and providing feedback on nurses' ethical actions. Future research should employ interventional studies that aim to identify the ways in which nurse leaders leverage organizational and individual measures to support nurses' ethical competence.

Keywords: organizational support, individual support, nurse leader, nurse, ethical competence, ethical safety, work satisfaction

TIIVISTELMÄ

Tarja Poikkeus

SAIRAANHOITAJIEN EETTISEN OSAAMISEN TUKEMINEN – Hoitotyön johtajan organisatorinen ja yksilöllinen tuki
Turun yliopisto, Lääketieteellinen tiedekunta, Hoitotiede, Suomi
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Hoitotyön johtajat ovat keskeisessä asemassa sairaanhoitajien eettisen osaamisen tukemisessa. Tämän tutkimuksen ensimmäisenä tavoitteena oli analysoida sairaanhoitajien eettisen osaamiseen tukemista sekä sairaanhoitajien että hoitotyön johtajien näkökulmasta, perustuen aikaisempaan kirjallisuuteen ja empiiriseen aineistoon. Toiseksi, tavoitteena oli analysoida organisatorisen ja yksilöllisen tuen yhteyttä sairaanhoitajan eettisen osaamisen, eettiseen turvallisuuteen ja työtyytyväisyyteen. Lisäksi tutkittiin eettisen osaamisen yhteyttä eettiseen turvallisuuteen ja työtyytyväisyyteen. Lopullisena tavoitteena oli tuottaa tietoa hoitotyön ammattietiikan alueella siitä, miten hoitotyön johtajat voivat tukea sairaanhoitajien eettistä osaamista, parantaa sairaanhoitajien eettistä turvallisuutta ja vahvistaa heidän työtyytyväisyyttä.

Tutkimus toteutettiin kahdessa vaiheessa. Ensimmäisessä vaiheessa suoritettiin neljä MEDLINE-, Ovid- ja British Nursing Index -tietokantaan tehtyä kirjallisuuskatsausta. Lisäksi kahdessa yliopistollisessa sairaalassa tehtiin poikkileikkaustutkimus, jossa analysoitiin, miten hoitotyön johtajat (N = 539, n = 198, vastausprosentti 37%) tukevat sairaanhoitajan eettistä osaamista rekrytoinnin ja kehityskeskustelujen aikana. Toisessa vaiheessa kehitettiin ja testattiin eettisen osaamisen tukemisen mittaria (EthiCS). Analysoitaessa keskeisten käsitteiden välisiä suhteita käytettiin kuvailevaa ja poikkileikkaavaa korrelaatiotutkimusta. Empiirinen aineisto kerättiin sairaanhoitajilta (N = 1100, n = 298, vastausprosentti = 26%) ja heidän hoitotyön johtajilta (N = 1100, n = 193, vastausprosentti = 16%). Tässä tutkimuksessa käytetyt analyysimenetelmät olivat kuvailevia ja tilastollisen päättelyn menetelmiä, kuten regressioanalyysi ja polkuanalyysi sekä laadullinen sisällön analyysi avoimille kysymyksille.

Tulokset osoittavat, että eettisen osaamisen organisatorinen tuki oli alhainen sairaanhoitajien mielestä ja kohtalainen hoitotyön johtajien mielestä. Sairaanhoitajat raportoivat yksilöllisen tuen olevan alhaisella tasolla ja hoitotyön johtajien mielestä se oli kohtalaisella tasolla. Organisatorinen ja yksilöllinen tuki olivat yhteydessä eettiseen osaamiseen. Vastaavasti eettisellä osaamisella oli positiivinen yhteys sairaanhoitajien eettiseen turvallisuuteen ja työtyytyväisyyteen. Hoitotyön johtajien organisatorinen ja yksilöllinen tuki paransi sairaanhoitajien eettistä osaamista, mikä puolestaan edisti heidän eettistä turvallisuuttaan ja työtyytyväisyyttään.

Hoitotyön johtajien olisi otettava käyttöön erilaisia tapoja tukea sairaanhoitajien eettistä osaamista; laadittava eettisten toimintatapojen suosituksia, tuettava moniammatillista keskustelua, etiikan koulutusta, eettisten ongelmien käsittelyä ja palautteen antamista eettisestä toiminnasta. Tulevaisuudessa tutkimuksen tulee kohdistua hoitotyön interventioiden kehittämiseen organisatoriselle ja yksilölliselle tuelle sairaanhoitajien eettiseen osaamiseen.

Avainsanat: eettinen osaaminen, organisatorinen tuki, yksilöllinen tuki, sairaanhoitaja, hoitotyön johtaja, eettinen turvallisuus, työtyytyväisyys

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ABBREVIATIONS

BNI   British Nursing Index database

CES   Clinical Ethics Support

CINAHL   Cumulative Index to Nursing and Allied Health Literature

CRD   Centre for Reviews and Dissemination

COREQ   COnsolidated criteria for REporting Qualitative research

CORDIS   Community Research and Development Information Service

ECO   Ethical Competence

ESA   Ethical Safety

ETENE   National Advisory Board on Social Welfare and Health Care Ethics

EthiCS   Ethical Competence Support instrument

HEC   Hospital Ethics Committees

ICN   International Council of Nurses

ICHRN   International Centre for Human Resources in Nursing

I-CVI   The Content Validity Index

ISEC   The Individual support for nurses' Ethical Competence

JCAHO   The Joint Commission on Accreditation of Healthcare
               Organizations

MEDLINE   Medical Literature Analysis and Retrieval System Online

NL   Nurse Leader

OSEC   The Organizational support for nurses' Ethical Competence

PAP   The Positive Agreement Percentage

RN   Registered Nurse

SD   Standard Deviation

SPSS   Statistical Package for the Social Sciences

STROBE   Statement for STrengthening the Reporting of OBservational
               studies in Epidemiology

TENK   Finnish Advisory Board on Research Integrity

THL   National Institute for Health and Welfare (Finland)

TTK   The Centre for Occupational Safety (Finland)

WHO   World Health Organization

WSA   Work Satisfaction

LIST OF ORIGINAL PUBLICATIONS

This thesis is based on the following original publications, which are referred to in the text by their Roman numerals (I-IV):

I   Poikkeus T, Numminen O, Suhonen R & Leino-Kilpi H. 2013. A mixed-method systematic review: Support for ethical competence of nurses. Journal of Advanced Nursing 70(2), 256–271. doi: 10.1111/jan.12213

II   Poikkeus T, Leino-Kilpi H & Katajisto J. 2014. Supporting ethical competence of nurses during recruitment and performance reviews – The role of the nurse leader. Journal of Nursing Management 22, 792–802. doi: 10.1111/jonm.12033

III   Poikkeus T, Suhonen R, Katajisto J & Leino-Kilpi H. 2016. Organizational and individual support for nurses' ethical competence: A cross-sectional survey. Nursing Ethics 1–17. doi: 10.1177/0969733016642627 I

IV   Poikkeus T, Suhonen R, Katajisto J & Leino-Kilpi H. 2018. Relationships between organizational and individual support, nurses' ethical competence, ethical safety and work satisfaction. Health Care Management Review (Epub ahead of print). doi: 10.1097/HMR.0000000000000195.

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1 INTRODUCTION

Professional ethics have ethical standards of conduct that are acknowledged as their responsibilities (Beauchamp & Childress 2013). In the field of professional nursing ethics, nurses' ethical competence is a vital part of professional competence and an inherent prerequisite to quality of care. In many countries, nursing education strives to support the development of nurses' ethical competence (Grady et al. 2008, Bærøe & Frithjof Norheim 2011). The importance of promoting value-based ethical action has been recognized on the international level (Dierckx de Casterlé et al. 2008, Suhonen et al. 2011) as well as nationally during Finnish healthcare reform (ETENE 2012). Nurses' ethical competence can be maintained and improved by nurses themselves and with the support of nurse leaders (Cooper & Menzel 2013). Therefore, systematic support for nurses' ethical competence should be the basis for effective, supportive leadership (Laukkanen, Suhonen et al. 2015), which is associated with a healthy work environment, work satisfaction and decreased nurse turnover (Kramer et al. 2007, Doody & Doody 2012, Storch et al. 2013a).

The need for more efficient support activities concerning nurses' ethical competence has been internationally recognized (Bærøe & Frithjof Norheim 2011). A prerequisite of good quality of care is continuous dialogue about ethical values that will strengthen nurses' ethical sensitivity and competence, which, in turn, form foundation of professional competence, patient safety and evidence-based care (Salmela, Koskinen & Eriksson 2017). Nurse leaders are responsible for enhancing nurses' ethical actions during ethical situations with patients, such as protecting autonomy, promoting safety, providing dignified care, as well as preventing damage and potential complications (ETENE 2001). The lack of such leadership can contribute to, or directly cause, moral distress (Cronqvist et al. 2006). In this way, if nurses feel that they will not get adequate support when handling ethical problems, then patient safety may be comprised and nurse's moral integrity will be impaired.

In general, administrative ethics support is considered to be part of daily management in healthcare (Ikola-Norrbacka 2010). In public healthcare administration, like in hospitals and health centres, one of the main goals is to promote ethical organizations and strive for professional excellence (Salminen & Ikola Norrbacka 2010). In nursing practice, nurse leaders are responsible for solving work-related ethical problems (Laukkanen, Suhonen & Leino-Kilpi 2015). In one large investigation, 71.6% of nurses and physicians from 24 countries reported experiencing ethical problems during end-of-life care in intensive care (Azoulay et al. 2009), such as lack of psychological support, absence of staff meetings, and problems

with the decision-making process. Meanwhile, a Finnish study found that nearly half of nurse leaders experienced ethical problems related to patients, staff and/or the organization on a daily or weekly basis (Aitamaa, Suhonen & Leino-Kilpi 2016). A study of Finnish and Dutch nurses described several ethical problems about quality of care, safety of nurses, patients' rights, and working with inadequate resources (Hopia, Lottes & Kanne 2016). The sources of ethical problems reflect advances in technology, patients' expectations of care, differing values and poor communication (Pavlish et al. 2013).

While supportive, ethical leadership has been examined in other disciplines (Salminen & Ikola Norrbacka 2010, Cooper & Menzel 2013), it has received far less attention in the context of nursing (Storch, Makaroff, Pauly & Newton 2013b, Rasoal et al. 2017b) and has focused on individual support activities not so much as ethical support activities as a whole. Nurse leaders can ensure the ethical competence of nurses by developing and implementing policies and protocols that address identified ethical problems (Honkavuo & Lindström 2014). Nurse leaders should also make sure that nurses are aware of, and have access to, continuing ethics education and ethics consultation (Smith et al. 2004, Grady et al. 2008). In addition, they are responsible for supporting the nurses who need to be empowered through shared ethical decision-making (Moody & Pesut 2006, Eneh, Vehviläinen-Julkunen & Kvist 2012). Earlier research has shown that nurse leaders are role models in ethics, maintaining ethical values and the principles that influence nurses' ethical actions (Deshpande et al. 2006).

The focus of this study was professional nursing ethics and leadership. This research concentrated on theoretical literature and empirical data on nurses' ethical competence, as well as the organizational and individual support that builds this competence. As such, the main concepts used throughout this thesis are *nurses' ethical competence*, *organizational support* and *individual support*. The development of specific organizational policies and individual support activities is becoming more prevalent, and serves to help nurse leaders become more proactive about supporting nurses' ethical competence in clinical practice (Parker, Lazenby & Brown 2013). In this thesis, *ethical safety* and *work satisfaction* are seen as essential factors supported by nurses' ethical competence. Ethical safety is defined as a nurse's independence to act according to their professional values (Filipova 2009) whereas value-based action (Ravari et al. 2013) is considered anything that strengthens nurses' work satisfaction.

The overall goal of the explorative and correlational, two-phase research was to combine knowledge regarding how nurse leaders support nurses' ethical competence, improve nurses' ethical safety and enhance their work satisfaction (Figure 1). The aim of the first phase was to analyze how nurse leaders support nurses'

ethical competence and search the literature for definitions and possible instruments. The second phased aimed to develop an instrument, the Ethical Competence Support (EthiCS) and analyze the relationship between organizational support (OSEC), individual support (ISEC) and nurses' ethical competence. The relationship between nurses' ethical competence, ethical safety and work satisfaction was also of interest.

Phase I (2009-2013)
THEORETICAL BACKGROUND
Aim: To analyze how nurse leaders support nurses' ethical competence and search the literature for relevant definitions and instruments.

Literature reviews	**Survey**
Sample: 31 (review 1), 34 (review 2), 33(review 3) and 12 (review 4) empirical research articles **Design:** A mixed-method systematic review and three literature reviews **Databases:** MEDLINE, CHINAHL, Ovid Nursing Database, BNI	**Sample:** Nurse leaders (N=539, n=198) **Design:** A descriptive, cross-sectional survey design **Instrument:** EthiCS version I

Phase II (2013-2017)
INSTRUMENTATION AND EMPIRICAL TESTING

Aim: To develop and test the Ethical Competence Support (EthiCS version II) instrument for evaluating the relationship between organizational (OSEC) and individual support (ISEC) for nurses' ethical competence, with a subsequent assessment of the relationship between nurses' ethical competence, ethical safety and work satisfaction.

Instrumentation	**Empirical testing**
Expert panel Ia and Ib (ethics experts n=10) and **Expert panel IIa and IIb** (nurses and nurse leaders n=8) **Sample:** pilot study nurses (N=110, n = 32) and nurse leaders (N=110, n = 15) **Design:** A descriptive, cross-sectional survey design **Instruments:** EthiCS version II, Ethical competence, Ethical Safety, Work Satisfaction Instruments	**Sample:** nurses (N=1100, n = 298) and nurse leaders (N=1100, n = 193) in primary, specialized healthcare and private settings **Design:** A descriptive, correlational cross-sectional survey design **Instruments:** EthiCS version II, Ethical Competence, Ethical Safety and Work Satisfaction Instruments

SUMMARY (2017-2018)

To combine knowledge about how nurse leaders support nurses' ethical competence, improve nurses' ethical safety and enhance their work satisfaction.

Figure 1   Study phases

2   THEORETICAL BACKGROUND

2.1   Literature reviews

Four separate literature reviews were conducted on empirical and theoretical literature in nursing and allied sciences. The first and second reviews aimed to provide a comprehensive understanding of concepts (cf. Rodgers 1989) linked to nurses' ethical competence and its associated support measures, as well as identify relevant instruments. The first literature review focused on support for nurses' ethical competence during recruitment and performance reviews (see 2.2.4. and Figure 3). Searches (Paper I, summary) of the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Medical Literature Analysis and Retrieval System Online (MEDLINE) and British Nursing Index (BNI) databases were conducted in 2009, with 31 articles reviewed from a total of 1064 retrieved citations.

Table 1   Literature review of support for nurses' ethical competence during recruitment and performance reviews

Focus	Search terms/queries	Limiters	Inclusion criteria
Ethical competence and nursing management	ethical competence mp. OR ethical competency mp. OR ethical reasoning mp. OR moral agency mp. OR moral reasoning mp OR ethical skills AND exp nursing AND nurse managers mp. OR leaders.mp. OR nursing administration mp. OR exp personnel management	1995-2010, English	original study articles, theoretical articles
Performance reviews	performance appraisal mp. OR performance appraisal interview OR performance review OR development discussion AND nurse managers mp. OR leaders.mp. OR nursing administration mp. OR exp personnel management	1995-2010, English	original study articles, theoretical articles
Recruitment	personnel recruitment mp. OR exp personnel selection OR hiring OR recruitment AND nurse managers mp. OR leaders.mp. OR nursing administration mp. OR exp personnel management	1995-2010, English	original study articles, theoretical articles
Nursing leadership	leadership/ or nursing administrators/ or nursing, supervisory AND exp ethics, nursing/ or exp ethics/ AND exp nursing Administration research/ or exp nursing staff, hospital/ or exp nursing staff/ or nursing/ or exp nursing, supervisory	1995-2010, English	original study articles, theoretical articles

*exp = explode, includes specific terms related to word, mp = mapping subject headings of related terms

A second, mixed-method systematic review concerning ethical competence and the organizational and individual support for nurses' ethical competence was conducted in MEDLINE, Ovid Nursing and BNI databases, yielding 512 citations published 1985–2012 (Review 2 in Paper I). A total of 33 articles were reviewed to clarify concepts and identify relevant instruments. The literature review presented in this thesis was updated to cover literature on support for nurses' ethical competence published up until January 2018.

The third and fourth literature reviews focused on concepts and instruments related to nurses' ethical safety and work satisfaction (summary, Paper IV). The third literature review evaluated the CINAHL database for literature published from 1986 to 2013, and included a manual search of *The Nursing Ethics* journal. The search, which employed relevant search terms (Table 2), yielded 210 citations. The resulting sample consisted of 20 studies, seven theoretical articles and five reviews published between 1992 and 2012 (Appendix 1 and 2). The reference lists of the reviewed articles were examined for additional resources (n=2). To ensure that the eligible references had not already been captured by database searching (Jadad et al. 1998), the literature reviews were identified as reference resources. A total of 33 articles were evaluated for information regarding nurses' ethical safety.

Table 2   Literature review of nurses' ethical safety

Search terms	Limiters	Expanders	Subjects / major headings	Inclusion criteria	Exclusion criteria
ethical OR moral AND safety OR certainty OR confidence OR status OR identity AND nurse	Published 1992-2012, full text, abstract available and English language	Applied related words	related to ethics, nursing	accessibility, relevance (i.e. containing an inferred definition of ethical safety), and usefulness to the analysis.	editorials, letters, articles in a trade journal and articles focusing on nursing students

The fourth literature review focused on nurses' work satisfaction (Table 3) and aimed to present a comprehensive overview of the concept of work satisfaction along with instruments that link work satisfaction and ethical aspects in nursing. The literature search was conducted in two databases, MEDLINE (Ovid) and CI-NAHL, with additional manual searches in the *Nursing Ethics* journal and reference lists of selected articles. A total of 12 studies related to work satisfaction were included in the review (Appendix 3).

Table 3   Literature review of nurses' work satisfaction

Search terms	Limiters	Expanders	Subjects / major headings or filters	Inclusion criteria	Exclusion criteria
job satisfaction OR work satisfaction AND nurse OR nursing AND ethics OR ethical leadership	Published 1/2008-3/2014, English language, research article, Peer reviewed	Applied related words	related to ethics, nursing, leadership	accessibility, relevance (i.e. containing an inferred definition of work satisfaction), and usefulness to the analysis.	editorials, letters, articles in a trade journal and articles focusing on nursing students

2.2   Support for nurses' ethical competence

The main concepts used throughout this thesis are *ethical competence*, *organizational support*, *individual support*, *ethical safety* and *work satisfaction*. This section provides definitions of ethical competence, organizational support and individual support that are based on the comprehensive reviews (Papers I and II). The use of these terms within the literature seems to be unsystematic and varying; therefore, it is important to provide clarified definitions for this thesis (Rodgers 1989, Gigliotti & Manister 2012).

2.2.1   Nurses' ethical competence

Ethical competence can be separated into two basic concepts: competence and ethical (De Schrijver & Maesschalck 2013), which are described from the nursing science perspective and in the context of nursing practice. Generally, competence is the prerequisite for properly performing a job in a professional manner. According to Beauchamp & Childress (2013), the ability to perform a task is often used in competence definitions and can be applied in different contexts. Competence as a concept can have different meanings based on whether it is considered at the organizational or individual level, or seen as personal or task-related attribute. There is a lack of consensus about the difference between the terms *competence* and *competency*. Both refer to a specific range of skills, knowledge, or abilities. Competency can be defined as possessing the knowledge, values, and skills that lead to best practice and optimal job performance (Potter 2004). The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) standards define

competence and competency in the same way, as "an individual's capacity to perform up to defined expectations" (Deshpande et al. 2006). A number of other terms, e.g. capability, capacity, ability, efficiency and proficiency, are used synonymously with competence and competency even though each term has its unique similarities and differences (Potter 2004).

There are many moral and ethical theories, yet they are too wide and rival to encompass entirely in this study. Focus in this study is rather in terms of how the concept ethical qualifies the context of competence (cf. De Schrijver & Maesschalck 2013) in nursing ethics. Ethics is a generic concept covering different ways of understanding morality. Definitions of moral and ethical are often used interchangeably (Storch, Rodney & Starzomski 2013). The adjective ethical has several meanings: a) it is relating to moral principles, b) it is taking moral questions or ethics as a subject or c) it conforms to moral principles or ethics of a profession (OED 2018). Philosophical understanding of morality is more profound reflection on moral theories. In the biomedical sciences traditional and practical professional ethics assumptions are based on moral theories and professional morality (Beauchamp & Childress 2013). Basically, ethics and morals refer to "right" and "wrong" conduct, but each moral theory expound a different conception of morality (Rachels & Rachels 2007). Basic principles of ethics; such as utility, consequences, rights/obligations and virtue influence on understanding about "right" and "wrong" conduct (Beauchamp & Childress 2013). Nursing ethics has focused on how these ethical obligations can be conducted in nursing practice ((Storch, Rodney & Starzomski 2013).

Nursing competence qualifications are extensive, consisting of theoretical knowledge, skills, values and attitudes (Jormsri et al. 2005, ICN 2008, EU 2013). According to Ääri et al. (2008), the concept of competence can be divided into clinical competence and professional competence. Clinical competence describes a nurse's ability to correctly perform duties that are directly related to patient care while professional competence refers to a nurse's ability to perform the general duties of their profession. Based on this distinction, ethical competence can be understood as the implementation of certain principles of nursing care in clinical practice and therefore, as part of clinical competence. However, ethical competence includes professional values and can therefore also be seen as a part of professional competence (Paganini & Yoshikawa Egry 2011).

In recent decades, instructions in nursing ethics have developed into formal codifications governing nurses' professional role (Beauchamp & Childress 2013). Acting according the standards of profession, an ethical nurse is a nurse who makes good choices and decisions that benefit patients (Storch et al. 2013a). Ethical practice in nursing involves encountering value conflicts and making a choice (Hartrick

Doane 2002, Varcoe et al. 2004). A nurse's capacity to process and resolve ethical concerns has been identified as a significant factor for professional conduct and whether health care organizations provide good quality of care (Schluter et al. 2008).

Table 4   Definitions of nurses' ethical competence in the literature

Definitions	Author, year
Moral behaviour has four components: 1) moral sensitivity; 2) moral judgment; 3) moral motivation; and 4) moral character.	Rest 1986, p. 3-4
"Clinical ethical competence is influenced by knowledge, understanding, personal attitude, subjective norms, intentions, and previous (nonprofessional) behavior."	Larkin 1999, p.303
Moral competency is "the ability to make moral sense of situations, use good moral judgement and intention, and engage in morally appropriate behavior."	Corley 2002, p. 646 (based on Rest 1986)
"Moral competence can be defined as the ability or capacity of persons to recognize their feelings as they influence what is good or bad in particular situations, and then to reflect on these feelings, to make their decision, and to act in ways that bring about the highest level of benefit for patients."	Jormsri et al.2005, p. 586
Ethical competence includes ethical awareness, communication skills, reflection skills, motivation and the skills needed to implement and evaluate the decision made.	Ågren Bolmsjö et al. 2006, p 347-348.
Ethical competence emphasize factors such as discerning situations and realizing responsibilities, awareness and reflection.	Kälvemark Sporrong et. al. 2007
"Ethical competence consist of both being (virtues) and doing (rules and principles), but also of knowing (critical reflection)."	Eriksson et al. 2007, 207
"Ethical comportment" manifests itself as a commitment to professional responsibilities that show up in what we call the professional's formation of a nursing practice identity, character, skilled know-how, and knowledge, as well as everyday "ethical comportment" as a professional nurse. Ethical comportment is "the embodied, skilled know-how of relating to others in ways that are respectful and support their concerns"	Benner et al. 2008, p. 474
Component of professional competence	Jormsri et al. 2005, Paganini & Yoshikawa Egry 2011
"Nurses demonstrating competencies in ethics domain will maintain courteous and professional standards of behaviour in accordance with relevant legal and ethical issues and respect common values of individuals and groups while striving for continuing improvement of service delivery and nursing workforce."	ICHRN 2010, p 17.
Ethical competence has following variables: 1) a commitment to high standards of personal and professional behavior, 2) a knowledge of relevant codes of ethics and laws, 3) the ability to engage in ethical reasoning, 4) the ability to identify and act on public service ethics and values, and 5) a commitment to promoting ethical practices.	Cooper & Menzel 2013, p. 9 (adapted from Menzel 2010)
"Ethical competence in healthcare is a personal capacity including ethical awareness, courage, willingness and skills in decision-making and ethical action."	Kulju et al. 2016, p. 410

Table 5 Concepts related to the nurses' ethical competence

Related concepts	Description of the concept	Author, year
ethical sensitivity	This concept, which is linked to ethics theory and principles, has two core features: 1) 'being aware'; and 2) 'responding and reacting to the needs of others'. Both of these features encompass moral behavior. Furthermore, this concept includes a professional's ability to recognize an ethical problem or the ethical aspects of a situation. Ethical sensitivity is an important component of decision-making in nursing practice, and is a prerequisite to making appropriate ethical decisions. This sensitivity is a personal capacity to 'sense' the moral significance of a situation, and is developed through personal experiences. As it is a behavioral concept, ethical sensitivity can have different descriptions, for example, a caring response, skill in identifying the ethical dimensions of care, intuition regarding others' comfort and well-being, and a component of moral care.	Ersoy & Göz 2001, Kim et al. 2005, Lützén et al. 2006

Weaver 2007, Sayers & Vries 2008, Schluter et al. 2008, Han et al. 2010 |
moral sensitivity	This concept is similar to ethical sensitivity, and describes the personal component within nurse-patient relationship. In this way, empathy towards patients' vulnerable situations as well as awareness of the moral implications of decisions are critical skills to this type of sensitivity.	Lützén et al. 2006, Lützén et al. 2010
ethical decision making	According to which research is followed, this concept can have either three or four components. Certain researchers have identified four components: (1) moral sensitivity; (2) moral judgement; (3) moral motivation; and (4) moral character. In contrast, the framework presented by Grundstein-Amado (1992) includes only three dimensions, namely, an individual's moral reasoning, a professional's decision-making, and the contextual dimension.	Rest 1986, Blake & Guare 1997, Lützén et al. 2006 Berggren et al. 2003, *based on Grundstein-Amado's framework)
moral judgement	This concept characterizes the process through which people determine that one course of action is more morally fit for a particular situation than another.	Rest 1986, Rest et al. 1997
ethical reasoning	This concept is an important part of the personal relationship between patient and nurse. The patient's and nurse's personal qualities influence the ethical decision-making process, while a nurse's cognitive reasoning regarding an ethical problem leads to ethical decision-making.	McAlpine et al. 1997, Rodney et al. 2002, Goethals et al. 2010
ethical behavior	This concept includes two subcomponents: 1) ethical reasoning; and 2) the actual implementation of ethical decisions. Ethical behavior can be considered as the result of a process that comprises reasoning and ethical decision-making.	Dierckx de Casterlé et al. 2004, Goethals et al. 2010
moral agency	This concept can be described through two quotations: "The capacity to recognise, deliberate/reflect on, and act on moral responsibilities"; and "Moral agency includes rational and self expressive choice, embodiment, identity, social and historical relational influences and autonomous action within wider societal structures."	Peter & Liaschenko 2003 Storch et al.2013a, p. 163

A review of definitions for nurses' ethical competence over the last decades reveals both variation and the lack of a clear consensus (Table 4). These different definitions have different number of components or variables from four up to five. The core concepts are knowledge of relevant codes of ethics and laws, ethical sensitivity, ethical decision-making and ethical action (or behavior). Since the 1980s, the term moral competency (Rest 1986, Corley 2002) has often been replaced with ethical competence (e.g. Jormsri et al. 2005, Eriksson et al. 2007, Paganini & Yoshikawa Egry 2011). Ethical competence as a concept has different meanings in administrative (Ikola-Norrbacka 2010), medicine (Larkin 1999) and nursing ethics. According to De Schrijver and Maesschalck (2013), individual ethical competence can be defined in three distinct ways: a) using a general definition; b) based on Rest's (1986) model; and c) understanding competence as personal knowledge, skills and abilities (KSA). In the field of nursing ethics, both Rest's and KSA approaches have affected the perception of ethical competence (cf. table 4 and 5).

Furthermore, published literature often explains ethical competence as a multidimensional phenomenon, including several related concepts (Table 5) such as ethical (Ersoy & Göz 2001, Kim et al. 2005, Han et al. 2010) or moral sensitivity (Lützén et al. 2006, Lützén et al 2010). Moral sensitivity as a concept is similar to ethical sensitivity, but still can have different descriptions of awareness and ability to recognize an ethical problem. In addition, ethical decision-making (Berggren & Severisson 2003), moral judgment (Rest 1986, Rest et al. 1997) and ethical reasoning (Rodney et al. 2002, Goethals et al. 2010) are sometimes presented as closely related concepts or synonyms. These concepts can have either three or four components determining ethical decision-making process. Ethical action (or behavior) is often seen as a result of the process of reasoning and ethical decision-making (Goethals et al. 2010).

In this thesis, the main components of nurses' ethical competence (Figure 2, adapted from Cooper & Menzel 2013 and De Schrijver & Maesschalck 2013) are: 1) knowledge of legislation; 2) knowledge of values, principles and codes of ethics; 3) ethical sensitivity; 4) ethical decision-making; and 5) ethical action. The research underlying this thesis used these components as the basis for developing an instrument that would measure nurses' ethical competence.
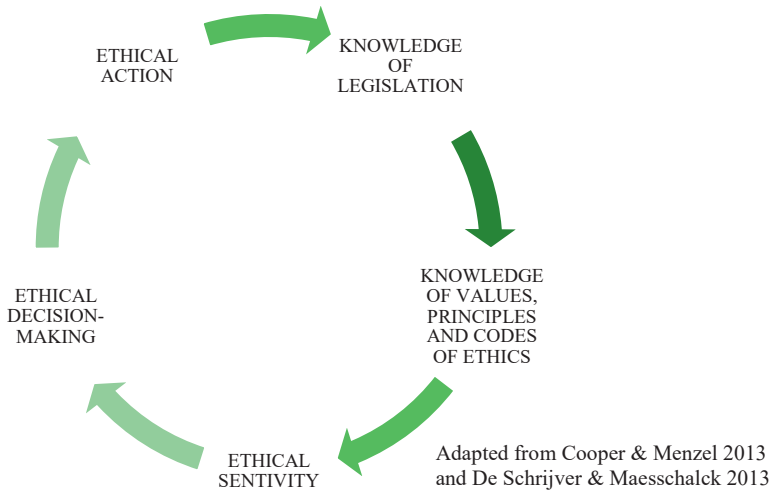
Figure 2   Components of nurses' ethical competence

The first component, *knowledge of legislation* forms the practical basis for nurses' ethical competence (Iltanen et al. 2012, De Schrijver & Maesschalck 2013). This component has a specific practical connection also with the leadership work of nurse leaders. If nurse leaders do not ensure, that nurses are familiar with relevant laws and regulations, they may advocate patient autonomy and make inadequate decisions. A basic knowledge of legislation is based on both international (WHO 1996, EU 2002) and national (Act 785/1992) juridical norms concerning patients' rights. The main juridical norms in Finland concern a patient's 1) right to access to treatment (Primary Health care act 66/1972), 2) right to good healthcare and fair treatment (Act 785/1992), 3) right to be informed and access their own medical records (Act 785/1992, Act 621/1999), 4) right to self-determination (Act 785/1992 6 §), 5) right to give consent to treatment (Act 785/1992 6 §), 6) decree on the creation and storage of patient records and other healthcare data (Decree 99/2001), and 7) confidentiality of information in patient documents (Act 785/1992). There are many challenges in the interpretation of legislation and values (Ikola-Norrbacka 2010), such as interpretations of the patient's self-determination, the right to be heard and the right to refrain from treatment (Beauchamp & Childress 2013), and therefore compliance with the laws and regulations and use of them requires ethical consideration.

The second component of ethical competence is *knowledge of values and principles as well as codes of ethics* (Verpeet et al 2003, Shirey 2005, Weis & Schank 2009, Höglund et al. 2010). As this component emphasizes ethical principles, such as respect for autonomy, beneficence, non-maleficence and justice (Beauchamp & Childress 2013), it guides nurses' ethical decision-making and actions (Fry & Duffy 2001).

The common codes of ethics and principles in Finnish healthcare are a citizen's right to good care, respect for human dignity, right of self-determination and justice. Furthermore, these principles entail good professional skills, an atmosphere conducive to wellbeing, as well as cooperation and mutual appreciation (ETENE 2001). Currently, healthcare professionals in Finland are guided by the following ethics codes: Ethics codes for nurse leaders (TAJA 2003); Ethical Guidelines of Nursing (Finnish Nurses Association 2014); Code of Medical Ethics (FMA 2014); Ethics codes for practical nurses (Super 2014). A nurse's knowledge of values, principles and codes of ethics will strengthen their ethical sensitivity (González-de Paz et al. 2012) and competence (Höglund et al. 2010), and, as such, may help them process and solve ethical problems.

The third component of ethical competence, *ethical sensitivity*, has its roots in James Rest's four-component model for moral action. Rest (1986) defines *moral sensitivity* – a synonym for ethical sensitivity - as an "awareness of how our actions affect other people". According to Weaver (2007), "ethical sensitivity as a behavioral concept has been described in the literature in several ways: a caring response, skill in identifying the ethical dimension of care, intuition regarding others' comfort and well-being, and a component of ethical care". Hence, ethical sensitivity is an important component of ethical decision-making (Han et al. 2010). Earlier studies promote ethical sensitivity as a type of practical wisdom that helps professionals respond appropriately to patient needs (Weaver et al. 2008).

Within this thesis, *ethical sensitivity* is understood as a nurse's ability to recognize ethical problems (Rest 1986, Lützén et al. 2006) and to identify which ethical aspects are related to their own moral values (Schluter et al. 2008), patients' personal values (Sayers & De Vries 2008, Lützén et al 2006, Robichaux 2012) and patients' rights (Iltanen et al. 2012). This requires the ability to sense and identify the alternative perspectives of a certain situation (Lützén et al. 2006, Robichaux 2012) by interpreting the verbal and nonverbal behaviors of patients (Ersoy & Göz 2001, Schluter et al. 2008). In practice, nurses need sensitivity to differentiate which problems concern their own values and which concern those of other people.

The fourth component, *ethical decision-making*, also referred to as ethical reasoning (cf. Benner et al. 2008), is a key component of ethical competence which has been extensively studied in nursing science (e.g. Berggren & Severinsson 2003, McGrath & Phillips 2009, Goethals et al. 2010, Cerit & Dinç 2012). Reasoning is about morality and how to act on reason, considering reasons for and against actions (Rachels & Rachels 2007). Most of the research into ethical decision-making has been based on the work of Kohlberg (e.g. Dierckx de Casterlé et.al. 2008). Ethical decision-making is a deliberative process during which nurses attempt to identify and define alternative actions, along with their consequences, so that they

can determine the best way to proceed in ethically demanding situations. Ethical decision-making frameworks and models (e.g. Grundstein-Amado 1992, Toren & Wagner 2010) mostly present the same structure for the decision-making process: 1) identify an ethical problem concerning different values; 2) clarify the personal and professional values, ethical principles and laws involved; 3) identify alternatives for analysis and comparison; 4) define the ethical consequences of the alternatives; and 5) evaluate the ethical effects of the chosen alternative.

The last component of ethical competence, *ethical action*, also presented as ethical/moral behavior, ethical comportment, or moral agency (cf. table 4 and 5), describes nurses' ethical behavior (Corley 2002, Goethals et al. 2010) based on ethical knowledge and guided by a nurse's own ethical sensitivity and decision-making skills. Situations in which nurses are not involved in the ethical decision-making can sometimes occur (Dreyer et al. 2011). A nurse's desire, as well as ability, to act ethically can be impeded by barriers; for example, lack of time for discussion, poor cooperation with doctors, along with the feeling of being ignored and not respected in the clinical setting (see Paper II). In these kinds of situations, a nurse leader's ethical competence heavily influences nurses' ethical actions, as ethical competence is the basis from which a superior can act as an ethical leader (Honkavuo & Lindström 2014). Ethical leadership can be described as the nurse leader's ability to improve, support and enhance the nurses' ethical competence (Cooper & Menzel 2013) by creating an ethical atmosphere in which nurses feel safe to voice their concerns (Storch et al. 2013a).

2.2.2 Clinical ethics support

The mixed-method systematic review (Paper I) revealed that both individual and organizational aspects need to be considered when defining and examining *support for nurses' ethical competence*. This section will begin by defining *clinical ethics support*, after which the subtleties of organizational and individual support for nurses' ethical competence will be discussed.

Due to changes in healthcare and concerns about the nurses' ethical action (Eriksson et al. 2007, Dierckx de Casterlé et al. 2008), nurse leaders are becoming increasingly responsible for creating an ethical environment (Teren and Wagner 2010, Suhonen et al. 2011) and supporting nurses' ethical competence. Furthermore, several researchers have concluded that nurses lack support in dealing with ethical problems and managers should proactively support nurses' ethical competence (Scanlon 1997, Corley 2002, Severinsson 2003, Cronqvist et al.2006, Storch et al. 2013a). The theoretical knowledge, skills, values and attitudes needed to plan, guide, and support by nurse leaders through human resource planning and

management (ICHRN 2010). Nurse leaders are pivotal in supporting norms of con-
duct, exercising supportive supervision, and ensuring adequate levels of commu-
nication. A report by the World Health Organization (WHO 2006) stated that su-
pervision, coupled with assessment and feedback, has the greatest influence on
healthcare professionals' competence. Another study found that a lack of support
from nurse leaders is one of the most common reasons that nurses leave their work
(Kramer et al. 2007).

Definitions of support for healthcare professionals' ethical competence already ex-
ist in the form of clinical ethics support (Slowther et al. 2004, Bærøe & Frithjof
Norheim 2011, Reiter-Theil et al. 2011, Rasoal et al. 2017a and 2017b) and moral
stress support (Cronqvist et al. 2006, Robaee et al. 2018). The main objectives of
clinical ethics support (CES) are to improve ethical decision-making and action in
the clinical environment, supervise policy-making as well as provide guidelines,
education and consultation (Bærøe & Frithjof Norheim 2011, Raosal et al. 2017).
CES has developed more slowly in Europe than in North America. Clinical ethics
committees have been in existence since the 1980s in certain countries, for exam-
ple, the Netherlands, but many European countries, like Finland, still lack formally
recognized ethics support. Moreover, some countries have specific legislation re-
garding ethics support; for example, in Belgium, every hospital is legally obligated
to have an ethics committee that addresses research and clinical issues. In addition,
the Norwegian parliament recommended that all hospitals should have a clinical
ethics committee and has funded a national center to co-ordinate their development
(Slowther et al. 2004).

First, a more formal definition of the aim of CES is "the provision of advice and
support on ethical issues arising from clinical practice and patient care within a
health care organization" (Slowther et al. 2004, p.6). Another form of support,
which has been extensively covered in the literature and is prevalent in North
American, is infrastructure comprising ethicists and clinical ethics committees that
advise on specific cases or promote ethical awareness among healthcare profes-
sions (Beauchamp & Childress 2013, Raosal et al. 2017). Clinical ethics commit-
tees (CECs), also called hospital or institutional ethics committees (HECs) have
been a feature of healthcare in North America since the 1970's. Clinical ethics
committees have also developed in Europe and Australia, although they are less
widespread than in North America. Furthermore, ethics consultation services, pro-
vided by individual ethics consultants or teams that may be associated with a CEC,
have also developed (Slowther et al. 2001). There has only been modest empirical
research on the outcomes of CES (Treviño et al. 2006), and support from col-
leagues is often seen as more appropriate than external solutions (Slowther et al.
2001).

The second definition for support, *moral stress support*, is defined by Cronqvist et al. (2006) as formal and informal support for emotional reactions and expressing points of views. In the perspective of this definition, support can be peer support meetings, individual support or group sessions held by the head nurse, counsellor, social worker, priest or psychologist. Cronqvist et al. (2006) found that moral stress support in the intensive care context involves three components: availability; accessibility; and receptivity. Availability of support refers to the provision of support at the unit level, whereas accessibility is affected by nurses' working situations and the general attitude towards support. Receptivity of support is connected to previous experiences, which have either positively or negatively influenced a professional's willingness to receive support.

2.2.3 Organizational support for nurses' ethical competence

A comprehensive review of the literature (Paper I, II) found that support at the organizational level includes four components: 1) encouragement of ethical activity; 2) provision of information on ethical issues; 3) dealing with ethical issues during work orientation; and 4) conversational support at the unit level (see references detailed in Table 6). Organizational support for ethical competence is important because it provides a resource which may help nurses confront perceived ethical conflicts (Ulrich et al. 2003). For example, a Canadian study by Austin et al. (2003) found that nurses were morally distressed when they were unable to respond to patient needs without organizational support. In a Finnish study, one-third of nurses did not perceive their organizational climate to be ethical, and almost half stated that they did not think their nurse leaders would support them in an ethical conflict (Leino-Kilpi et al. 2002). A Swedish study revealed that teamwork, support and information within the team promote an ethical climate (Silén et al. 2012).

Ethical competence is formed in a social context through an individual development process (Andrews 2004, Hartrick Doane et al. 2009, Paganini & Yoshikawa Egry 2011). At the organizational level, this requires an ethical climate and supportive ethical procedures. Organizational support, especially that concerning ethical actions, is vital to supporting the development of nurses' ethical competence (Dehghani et al. 2015, Robaee et al. 2018). Organizational ethics policies and procedures need to cover a wide range of distinct ethics activities (Bollig et al. 2015), such as ethics education (Berggren & Severisson 2003, Grady et al. 2008), ethics rounds (Kälvemark Sporrong et al. 2007), and ethics consultation (Smith et al. 2004, Bollig et al. 2015), to adequately support nurses' ethical competence. Nurses participating in continuous ethics education were found to be more confident in

their ethical decision-making as well as more likely to use ethics resources and choose the correct ethical action Grady et al. 2008). There are several examples of how a nurse ethicist (Helft et al. 2009, Wocial et al. 2010, Reiter-Theil et al. 2011), doctor (Reiter-Theil et al. 2011), or philosopher (Cummins 2002) can provide nursing ethics consultation. The best environments for supporting ethical competence are based on multidisciplinary cooperation and conversation (Blake & Guare 1997, Rodney et al. 2002, Lemiengre et al. 2008). Furthermore, Scanlon (1997) stated already in 1990's, that the creation of written policy statements and guidelines is extremely important to developing the ethical competence of nurses.

Healthcare organizations can help nurses develop their ethical conversation skills by ensuring that ethics books and research articles are available (Turner 2003, Chiu & Wilson 1996, Rodney & Street 2004, Hader 2005, Kleinman 2006, Marquis & Huston 2006). Other researchers have recommended using supervision (Severinsson 2003) or informal discussions (Goethals et al. 2010, McGrath & Phillips 2009) to foster the development of ethical conversation skills. More recent research has identified nurse leaders' participation in deliberative conversation on ethical issues as vital to forming a common understanding between managers and nurses (Hartrick Doane et al. 2009, Weidema et al. 2013). Ethics screening tools (Pavlish et al. 2011a and 2011b, Pavlish et al. 2013) or checklists for identifying ethical clinical situations (Anderson-Shaw et al. 2007) are additional tools that have been recently mentioned in the literature.

2.2.4   Individual support for nurses' ethical competence

An in-depth screening of the literature identified seven components of *individual support* for nurses' ethical competence (Paper I, II). At the individual level, nurse leaders should work to ensure nurses' 1) compliance with laws and regulations and 2) with ethical values and principles. Additionally, the support should focus on 3) multidisciplinary discussion of ethical issues, 4) participation in ethics education, 5) peer support, 6) helping professionals manage ethical problems and 7) compliance with codes of ethics (see references detailed in Table 6). A Finnish study of ICU nurses found that employees were positive about their work environment when they had opportunities to discuss issues with colleagues and perceived support for ethical problems (Leino-Kilpi et al. 2002) This means that nurse leaders are responsible for creating and nurturing professional relationships among nurses (Honkavuo & Lindström 2014) as well as moving towards transactional management that will both support and empower nurses (Eneh et al. 2012).A transforma-

tional manager will push nurses to become independent, responsible and autonomous in their decision-making by improving current levels of values and standards (Höglund et al. 2010, Doody & Doody 2012).

Table 6　　　Support for nurses' ethical competence

Organizational support	
Components	Author, year
Encouragement of ethical activity	Ludwick 1999, Kim et al. 2005, Tadd et al. 2006, Lemiengre et al. 2008, Cashin. 2008, Höglund et al. 2010, Kulju et al. 2016
Provision of information on ethical issues	Bahcecik & Oztu 2003, Verpeet et al. 2006, Aitamaa 2010, ICHRN 2010, Höglund et al. 2010
Dealing with ethical issues during work orientation	Taylor 1993, McPherson et al. 2004, Kälvemark Sporrong et al. 2006, Turner 2003, Kramer et al. 2007, Kälvemark et al. 2009
Conversational support at the unit level	Shirey 2005, Malloy et al. 2009, McGrath & Phillips 2009, Goethals et al. 2010, Bollig et al. 2015, Laukkanen et al. 2015, Numminen et al. 2015, Kulju et al. 2016, Rasoal et al. 2017a
Individual support	
Components	Author, year
Compliance with laws and regulations	Marquis & Huston 2006, Spence & Wood 2007, Ruoranen 2011, Eneh et al. 2012, Iltanen et al. 2012, Salmela et al. 2017
Compliance with ethical values and principles	Chiu & Wilson 1996, Turner 2003, Kim et al. 2005, Hader 2005, Shirey 2005, Kleinman 2006, Marquis & Huston 2006, Kramer et al. 2007, Spence & Woodb 2007, Lemiengre et al. 2008, Kälvemark et al. 2009, Weis & Schank 2009, ICHRN 2010, Höglund et al. 2010, Ruoranen 2011, Eneh et al. 2012, Laukkanen et al. 2015, Kulju et al. 2016, Robaee et al. 2018
Multiprofessional discussion of ethical issues	Shirey 2005, Kramer et al. 2007, Kälvemark Sporrong et al. 2007, Tsaloglidou et al. 2007, Hartrick Doane et al. 2009, Malloy et al. 2009, McGrath & Phillips 2009, Goethals et al. 2010, Gjeberg et al. 2010, Dreyer et al.2011, van der Dam et al. 2011, Raosal et al. 2017, Salmela et al. 2017
Ethics education	Kramer et al. 2007, Kälvemark Sporrong et al. 2007, Cronqvist et al. 2006, Grady et al. 2008, Goethals et al. 2010, Dehghani et al. 2015, Numminen et al. 2015, Kulju et al. 2016
Peer support	Bell 2003, Berggren et al. 2003, Tsaloglidou et al. 2007, Hartrick Doane et al. 2009, Gjerberg et al. 2010, Goethals et al. 2010, Silén et al. 2012, Dehghani et al. 2015
Dealing with ethical problems	Scanlon 1997, Bell 2003, Berggren et al. 2003, Hader 2005, Kälvemark Sporrong et al. 2007, Tsaloglidou et al. 2007, Spence & Wood 2007, Malloy et al. 2009, Mcgrath & Phillips 2009, Ruoranen 2011, van der Dam et al. 2011, Silén et al. 2012
Compliance with codes of ethics	Marquis & Huston 2006, Höglund et al. 2010, ICHRN 2010

The individual support for ethical competence provided by nurse leaders will lay the foundation for nurses' ethical actions in difficult clinical situations (Honkavuo & Lindström 2014). Support at the individual level must include feedback regarding whether the behavior was ethical or unethical (Berggren et al. 2003). Any type of support for ethical competence from nurse leaders will require systematic efforts. This comprises different activities: providing learning opportunities that support individual and team awareness of collegial communication (Moody & Pesut 2006); empowering nurses through shared decision-making; providing feedback (Eneh et al. 2012); providing possibilities for education; and regularly discussing ethical values and principles in performance appraisals (Spence & Wood 2007, Ruoranen 2011, Eneh et al. 2012). Deshpande et al. (2006) found that the most important factor influencing nurses' ethical behavior is peers who act as role models. Furthermore, nurse leaders' supportive behavior was shown to be an essential component of a productive, healthy work environment (Austin et al. 2003, Kramer et al. 2007, Storch et al. 2013b).

From a nurse leader's perspective, individual support for nurses' ethical competence can be understood as structural support through human resource management (Figure 3, and see Paper II). Support for nurses' ethical competence should continue throughout the entire human resource management process (work advertisement, selection criteria, work interview, work orientation, performance reviews).

RECRUITMENT
- Ensuring the knowledge of values and principles
- Going through organizational values and principles during a work interview
- Using case examples when assessing ethical behavior during a work interview
- Ethical competence as a selection criterion

ORIENTATION
- Going through organizational values and principles during work orientation
- Reflection about values and principles
- Assessment of ethical behavior during work orientation

PERFORMANCE REVIEWS AND DAILY LEADERSHIP
- Support for ethical cooperation with other professional groups
- Support for collegiality
- Assessment of ethical behavior in an ethical conflict
- Feedback on ethical behavior in an ethical conflict
- Compliance with codes of ethics, values and principles as well as laws and regulations

Figure 3   Ethics support throughout human resource management

Support begins at the recruitment and continues during performance reviews (development discussion), in daily management and in clinical situations (ICHRN 2010). Support for nurses' ethical competence through human resource management provides opportunities for ongoing ethics education as well as professional development and growth, constructive feedback about competence, support for nurses, performance evaluations based on both actions and feedback, and a framework for effective teamwork and communication (ICHRN 2010). Successful human resource management includes communication, recruitment and selection processes, supportive supervision, performance appraisal, staff training and development, recognition and awards, along with (ethical) conflict prevention and resolution.

2.3   Factors supported by ethical competence

The third and fourth literature reviews identified several factors that are influenced by nurses' ethical competence. For example, ethical climate (Leino-Kilpi et al. 2002, Shirey 2005, Silén et al. 2012), nurses' moral distress (Corley et al. 2002, Lützén et al. 2010), and work satisfaction (Goldman & Tabak 2010) have been widely studied in the field of nursing. The research underlying this thesis found

ethical safety (Appendix 2) and *work satisfaction* (Appendix 3) to be essential factors that are supported by nurses' ethical competence. These two factors, along with a detailed description of their relationship with ethical competence, will be presented in the next chapters.

Firstly, based on earlier studies on ethical climate, a new approach to the supported factors is presented from a novel point of view, namely ethical safety. The concept of ethical climate can be extended to nurses' ethical safety in order to further explore factors affected by ethical competence. Ethical climate has mostly been studied in business research and in light of job satisfaction (Goldman & Tabak, 2010). Storch, Rodney and Starzomski (2013, page 11-12) presents ethical climate as a 'moral community', expanding the concept as "as a place where values direct action, are clear, shared and a place where individuals feel safe to be heard". According to Vanderheide et al. (2013, page 110) "habitable environments exist where there is shared understanding about differing levels of responsibility and shared cooperation, recognition and benefits". In an ethical work environment, also referred to as a healthy work environment, nurses are respected, valued and have a voice when ethical problems are discussed (Parker, Lazenby & Brown 2013). Furthermore, González-de Paz et al. (2012) referred to nurses' personal safety. Based on these descriptions a review and deductive reasoning of ethical safety was conducted (see 2.3.1).

Secondly, research focusing on different characteristics of the nurses' working environments, notably, ethical climate, moral distress and work satisfaction, has not paid enough attention to the influence of ethical competence on work satisfaction. For this reason, a deeper understanding regarding how an organization's ethical policies and procedures affect nurses' work satisfaction (Martin & Cullen 2006, González-de Paz et al. 2012) is considered for this research. Nurse leaders have a significant role promoting nurses' work satisfaction, especially through supporting their interpersonal relationships and capacity to provide high-quality care (Utriainen & Kyngäs 2009). Beside of this, work satisfaction is one of the significant factors related to nurses' quality of care (Biton & Tabak 2003). According to Browne (2009), ethical knowledge and procedures can positively influence nurses' work satisfaction. Furthermore, nurses' work satisfaction depends on nurse leaders' effectiveness in creating ethically safety workplaces (Browne 2009).

2.3.1   Ethical safety

The first factor found to supported by nurses' ethical competence, *ethical safety*, is a relatively new concept in the field of nursing ethics. For example, the third literature review did not identify any studies, which focused directly on nurses'

ethical safety. In general, definitions of safety varied, for example in industry and in aviation they are based on risk assessments. Meanwhile patient safety culture assessments are based on to monitor healthcare professionals' attitudes and derivatived mainly from industrial definitions. Also patient safety culture components (Desmedt et al. 2018) and nursing leadership styles (Alingh et al. 2018) are included in patient safety instruments and definitions. Similarly, occupational safety is often defined based on cultural components (Kines et al. 2011) or circumstances, policies, procedures and practices related to safety in the organization (Tremblay & Badri 2018). As conclusion, safety can be defined in different ways by using descriptions about experience of safety, culture of safety or circumstances of operation.

In this study, ethical safety refers to the experience of nurses and it is defined based on empirical studies. Although nurses' ethical safety was not explicitly mentioned in the reviewed nursing research, an iterative process which included drawing inferences (Whittemore & Knafl 2005) identified the primary components of ethical safety experienced by nurses (Table 7) to be: 1) general ethical safety; 2) ethical autonomy; 3) ethical respect; and 4) ethical confidence. Rodgers (1989) has earlier proposed that associating a concept with a particular phenomenon will make it more attractive to apply the concept to similar instances in the future.

Table 7 Components of ethical safety

Components	Author, year
General ethical safety	Nelson 2004, Varcoe et al. 2004, Sørlie et al. 2005, Weaver 2007, Schluter et al 2008, Wadensten et al. 2008, Hartrick Doane, Storch & Pauly 2009, Robichaux 2012, Thorup et al. 2012
Ethical autonomy	Hartrick Doane 2002, Dodd et al. 2004, Tarlier 2004, Schminke et al.2005, Takase et al. 2005, Filipova 2009, Goldman & Tabak 2010, Laabs 2012, Charles 2017
Ethical respect	Berggren and Severinsson 2003, Dodd et al. 2004, Tarlier 2004, Wadensten et al. 2008, Moody Fairchild 2010, Laabs 2012, Thorup et al.2012,Salmela et al. 2017
Ethical confidence	Tarlier 2004, Varcoe et al. 2004, Kramer et al. 2007, Fry & Duffy 2001. Eneh et al. 2012, Ulrich et al. 2010, Pavlish et al 2011a, Parker et al. 2013

The first component, nurses' *general ethical safety* is realized when they are able to provide ethical and good care (Nelson 2004, Sørlie et al. 2005, Weaver 2007,Wadensten et al. 2008, Hartrick Doane, Storch & Pauly 2009,Thorup et al. 2012), as well as act according to professional values (Schluter et al 2008, Varcoe et al. 2004, Robichaux 2012). Good care is related to a nurse's knowledge, skills and experience, and can be considered from an ethical perspective. Nelson (2004) stated that nurses' ethical actions are characterized by the ability to act within an increasingly dysfunctional healthcare system and, as such, need to be supported

now more than ever. Previous research has found that a value-oriented approach influences both nurses' ethical knowledge and their nursing practice (Hartrick Doane 2002, Weis & Schank 2009, Hartrick Doane et al.2009).

Although recommendations, standards, along with philosophical and theoretical knowledge of good care exist, little is known about nurses' everyday ethical actions for good care. Sørlie et al. (2005) found that nurses working in an acute nursing care ward experienced stress and felt inadequate when they were not able to provide good care. These nurses reported that support and organizational security help them confront demanding situations. A study conducted in Sweden and China found that nurses perceived limited power to fulfil their duty of providing the best care (Wadensten et al. 2008). In this study, nurses reported that their provision of high-quality care was limited by insufficient knowledge, having too many patients and time restraints. Furthermore, a Nordic study in which Swedish, Finnish and Danish nurses were interviewed revealed that nurses' own vulnerabilities seem to shape their courage and influence their ability to provide good care (Thorup et al. 2012).

Values are related to the ethical safety experienced by nurses. According to Rachels & Rachels (2007), there are always values that are common and necessary for members of certain group. Goldman and Tabak (2010) stated that the basis for moral reasoning emerges from personal beliefs and values. Similarly, Filipova (2009) maintains that registered nurses highly value the use of personal values. Victor and Cullen (1988) stated that in a caring organization people look out for each other whereas in an independence organization people are expected to follow their own personal ethical values. Furthermore, Takase et al. (2005) found that nurses actively behave in accordance with their professional values. Nurses have reported that they often make decisions using both their own and organizational values. Varcoe et al. (2004) found that organizational values and expectations cause nurses to act according to what they perceive as 'good', while contextual forces constrain their ability to act in ways they consider ethical. Furthermore, both Robichaux (2012) and Schluter et al. (2008) provide evidence that ethical sensitivity includes the capacity to act and provide care according to a nurse's own moral values. These values influence the quality of care provision by affecting nurses' ethical decision-making (Schluter et al. 2008, Weis & Schank 2009).

The second component, nurse's *ethical autonomy* can be seen as their independence to act according to personal moral convictions when making ethical decisions (Schminke et al. 2005). Ethical autonomy is based on personal moral sense as well as which views are shared among nurses (Laabs 2012). Hartrick Doane's (2002) description of ethical identity provides justification for why ethical autonomy is a component of ethical safety. Their research, which consisted of nineteen focus

group interviews, found that certain nurses identify themselves as ethical nurses and/or ethical agents. For example, one nurse stated that: 'for me being ethical is being my professional self and my real self.' (Hartrick Doane 2002, p. 630). Nelson (2004) concurs that expert nurses with high levels of clinical autonomy act as independent ethical actors. However, Nelson (2004) stated that becoming an autonomous ethical actor is not as simple as assumed. Rather, it also describes the ability of nurses to act within increasingly complex healthcare environments. Tarlier (2004) pointed out that ethical autonomy is associated with the nurses' individual desire for the decision to act ethically. In practice, nurses' abilities to make decisions during ethical conflicts may influence their degree of self-efficacy. If nurses do not see ethical decision-making as part of their role or do not feel supported in their decision-making, they may fail to participate in the multi-professional decision-making process (Laabs 2012).

Even though nurses can play an important role in ethical decision-making, previously published literature revealed varying accounts of ethical autonomy in practice. Dodd et al. (2004) stated that nurses have different degrees of autonomy in clinical practice. For example, nurses sometimes conduct their ethical activities almost invisibly. When nurses are unable to blindly follow physicians' orders, they must make an additional judgement. Dodd et al. (2004) concluded that specific questions related to nurses' ethical autonomy describe the extent to which nurses feel included by physicians in ethics deliberations, as well as whether they feel that they have received a mandate from the organization to participate in ethical multi-professional decision-making. Multiprofessional decision-making can improve the process of decision-making and clarify professional roles and support ethical safety of nurses. Administrative policies can offer significant support for the professional autonomy of nurses (Charles 2017).

The third component of ethical safety; *ethical respect* occurs when a person treats others as inherently worthy and equal, accepts other individuals, is willing to listen to others and makes an attempt to understand another person's situation. These basic ethical assumptions of respect are related to a nurse's professional status. On a more general level, it has been described as the situation during which nurses have the sense of being a complete human being (Berggren and Severinsson 2003, Thorup et al. 2012) based on their personal attributes (Thorup et al. 2012). Tarlier (2004) emphasizes that "respect for self as well as others is arguably the most fundamental moral value". Wadensten et al. (2008) found that nurses lack respect and interprofessional communication.

Through this respectful relationship among healthcare professionals nurses are motivated to care in terms of morality and competency (Moody Fairchild 2010, Salmela et al. 2017). Dodd et al. (2004) found that nurses are more likely to be

ethically active and assertive in settings which already respect their involvement. Ethical assertiveness means that nurses do not confine their actions regarding ethical matters to only those situations in which they are formally invited to participate by physicians or patients. A cross-cultural comparison of Swedish and Chinese nurses' ethical concerns demonstrated that nurses either felt that their opinions were not valued or that they could not influence decisions concerning patient care (Wadensten et al. 2008). Furthermore, both Swedish and Chinese nurses felt that they were not being respected or listened to as professionals.

The fourth component; *ethical confidence* (i.e. trust) is related to professional qualifications, skills, and competence (Tarlier 2004). Ethical confidence evident between nurses and doctors, and sometimes between nurses (Fry & Duffy 2001). Furthermore, trust between nurses and their leaders is essential for a healthy work environment (Kramer et al. 2007, Eneh et al. 2012) in which nurses can have open and positive dialogues with other professionals while being treated as equals (Parker et al. 2013). Ethical confidence is the link between personal and public morals, or personal morals and disciplinary ethics.

Based on earlier research, ethical confidence did always not fulfill. Pavlish et al. (2011a) conducted a survey of early indicators and risk factors for ethical issues in clinical practice and found that nurses questioned physicians' and other nurses' ethical behavior. Nurses expressed concerns about how to follow standards of care, unethical organizational practices and patient autonomy. Furthermore, 30 % of the nurses reported not taking any ethical action and almost half of the nurses had difficulty voicing concerns and directing action during ethical conflicts. In another study, Ulrich et al. (2010) found that many nurses express a sense of powerlessness and perceive that they have little influence on the actions of others when asked about ethical issues. Nevertheless, a majority of nurses cited confidence in justifying their ethical decision-making. These contradictory findings could be explained by hierarchical relationships and traditional power structures, both of which can result in physicians ignoring or dismissing nurses' ethical comments and/or concerns (Varcoe et al. 2004).

2.3.2 *Work satisfaction*

Previous research has linked *work satisfaction* with ethical climate (Numminen et al. 2015), organizational support and moral distress (Robaee et al. 2018). Work satisfaction is often described by the terms *job satisfaction* or *well-being at work* (Utriainen & Kyngäs 2009). Work satisfaction can be defined as a positive concept that describes nurses' personal attitudes and experiences toward their work (Biton & Tabak 2003, Utriainen & Kyngäs 2009). Most studies focus on organizational,

managerial, professional, co-operational and individual components of work satisfaction (Kvist et al. 2012, Suhonen et al. 2013). Nevertheless of this variety of different scales and definitions (Lu et al. 2012) of work satisfaction, in this study, main work satisfaction components (Table 8) are defined: 1) satisfaction with the work duties and 2) workload (Nolan et al. 1998). Also satisfaction with the 3) working environment (Huang et al. 2012), 4) satisfaction at current workplace (i.e. congeniality /comfortness at the current workplace, cf. Huang et al. 2012, Lu et al. 2012), 5) satisfaction with factors supporting work satisfaction (Tsai & Huang 2008, Goldman & Tabak 2010) as well as 6) emotional and 7) physical requirements of work (Huang et al. 2012).

The relationship between work satisfaction and ethical aspects of nursing has earlier been studied from perspectives of work satisfaction, nurses' morale, value congruence and ethical climate (Appendix 3). In this way, nurse leaders can improve nurses' work satisfaction by supporting their ethical behavior. Ethical work satisfaction forms when nurses are able to participate in decision-making and provide ethical care. In other words, a sound ethical environment and the associated support from nurse leaders are essential for work satisfaction (Dehghani et al. 2015). Previous studies have also found perceived workload to be associated with nurses' morale (Nolan et al. 1995). Particularly, an unrealistic amount of work and/or excessive workloads reduce nurses' morale, whereas supportive management approaches contribute to a nurse's ability to provide good patient care (Nolan et al. 1995, Nolan et al. 1998).

Table 8 Components of Work Satisfaction

Components	Author, year
Satisfaction with the work duties	Joseph & Deshpande 1997, Nolan et al. 1998, Verplanken 2004, Ulrich et al. 2007, Tsai & Huang 2008, Ravari et al. 2013
Satisfaction with the workload	Nolan et al. 1995, Nolan et al. 1998, Schluter et al. 2008
Satisfaction with the work environment	Takase et al. 2005, Huang et al. 2012, Dehghani et al. 2015
Congeniality at the current workplace	Verplanken 2004, Tsai & Huang 2008, Huang et al. 2012, Lu et al. 2012
Satisfaction with factors supporting work satisfaction,	Tsai & Huang 2008, Goldman & Tabak 2010
Satisfaction with emotional requirements	Verplanken 2004, Huang et al. 2012, Ravari et al. 2013
Satisfaction with physical requirements	Huang et al. 2012

Work satisfaction is associated with the ethical climate and results in lower turnover among nurses (Joseph & Deshpande 1997, Ulrich et al. 2007, Tsai & Huang 2008, Goldman & Tabak 2010). A nurse leader's duty is to help nurses understand and resolve ethical problems in order to attract and retain them at the workplace

(Joseph & Deshpande 1997, Schluter et al. 2008). One recent study found value incongruence to be related with burnout, accident propensity and nurses' intention to change jobs (Bao et al. 2013). A Norwegian study (Verplanken 2004) found that value congruence, especially that concerning organizational values, plays an important role in nurses' work satisfaction. Furthermore, Ravari et al. (2013) found that work-related values, including those related to encouraging tolerance and enhancing inner harmony, affect nurses' work satisfaction. Based on other nursing studies, work-related values reduced dissatisfaction with work and therefore, values (Takase et al. 2005, Ravari et al. 2013) are pivotal to strengthening nurses' work satisfaction. Respectively Huang et al. (2012) found that ethical climate increased nurses' work satisfaction.

2.4   Summary of the theoretical background

In conclusion, the main concepts that will be used throughout this thesis can be summarized as follows, with Figure 4 presenting the theoretical background for the thesis.

Ethical competence (ECO) is a component of professional nursing competence that is formed in a social context through an individual development process. Ethical competence can be defined as ethical action that requires knowledge of legislation, knowledge of values, principles and codes of ethics, ethical sensitivity and decision-making for meeting and solving ethical problems.

Support for ethical competence (SEC) refers to nurse leaders' systematic support for nurses' ethical competence at the organizational (OSEC) and individual (ISEC) levels. This support can be offered through human resource management. Systematic support for nurses' ethical competence begins during recruitment and continues throughout all stages of the hiring process (work advertisement, selection criteria, work interview and orientation). Support continues throughout performance reviews and in daily leadership related to clinical situations.

Ethical safety (ESA) is a concept expressing experiences of nurses. Ethical safety is the nurses experience of being safe, having independence to act according to their professional values. It includes the concepts of general ethical safety, ethical autonomy, ethical respect and ethical confidence. Ethical safety is built through respect from other colleagues as well as confidence in ethical decision-making.

Work satisfaction (WSA) is a positive concept that describes nurses' personal attitudes and experiences towards their work. Work satisfaction includes satisfaction

with the work duties, workload, satisfaction with the work environment, satisfaction at current workplace, factors supporting work satisfaction, as well as satisfaction with the emotional and physical demands.

Providing adequate support for nurses' ethical competence can be demanding and challenging for nurse leaders. Little is known about the nurse leader's role in supporting nurses' ethical competence both at the individual and organizational level. Earlier empirical research has emphasized the provision of support as one of the nurse leader's many responsibilities, but there is a lack of research describing which ethics support activities are available and how they support nurses in clinical practice (Rasoal et al 2017a). For this reason, nurse leaders need further information about practical support activities if they want to develop effective organizational and individual measures for supporting nurses' ethical competence.

Furthermore, the specific relationships between support for nurses' ethical competence, ethical safety and work satisfaction need to be clarified. A deeper understanding of the relationship between organizational support, individual support and ethical competence should be the primary aim, while a clarification of the links between ethical competence, ethical safety and work satisfaction will improve evaluations of the available organizational and individual support for nurses' ethical competence. This research holds the promise of enhancing ethical safety in the clinical environment and improving work satisfaction among nurses.

SUPPORT FOR NURSES' ETHICAL COMPETENCE BY NURSE LEADERS

ORGANIZATIONAL SUPPORT
Encouragement of ethical activity
Provision of information on ethical issues
Dealing with ethical issues during work orientation
Conversational support at the unit level

INDIVIDUAL SUPPORT
Compliance with laws and regulations
Compliance with ethical values and principles
Multidisciplinary discussion of ethical issues
Support for ethics education
Peer support
Support for dealing with ethical problems
Compliance with codes of ethics

ETHICAL COMPETENCE

KNOWLEDGE OF LEGISLATION
KNOWLEDGE OF VALUES, PRINCIPLES AND CODES OF ETHICS
ETHICAL SENTIVITY
ETHICAL DECISION-MAKING
ETHICAL ACTION

FACTORS SUPPORTED BY ETHICAL COMPETENCE

WORK SATISFACTION
Satisfaction with the work duties
Satisfaction with the workload
Satisfaction with the working environment
Satisfaction at current workplace
Factors supporting work satisfaction
Satisfaction with emotional demands
Satisfaction with the physical demands

ETHICAL SAFETY
General ethical safety
Ethical autonomy
Ethical respect
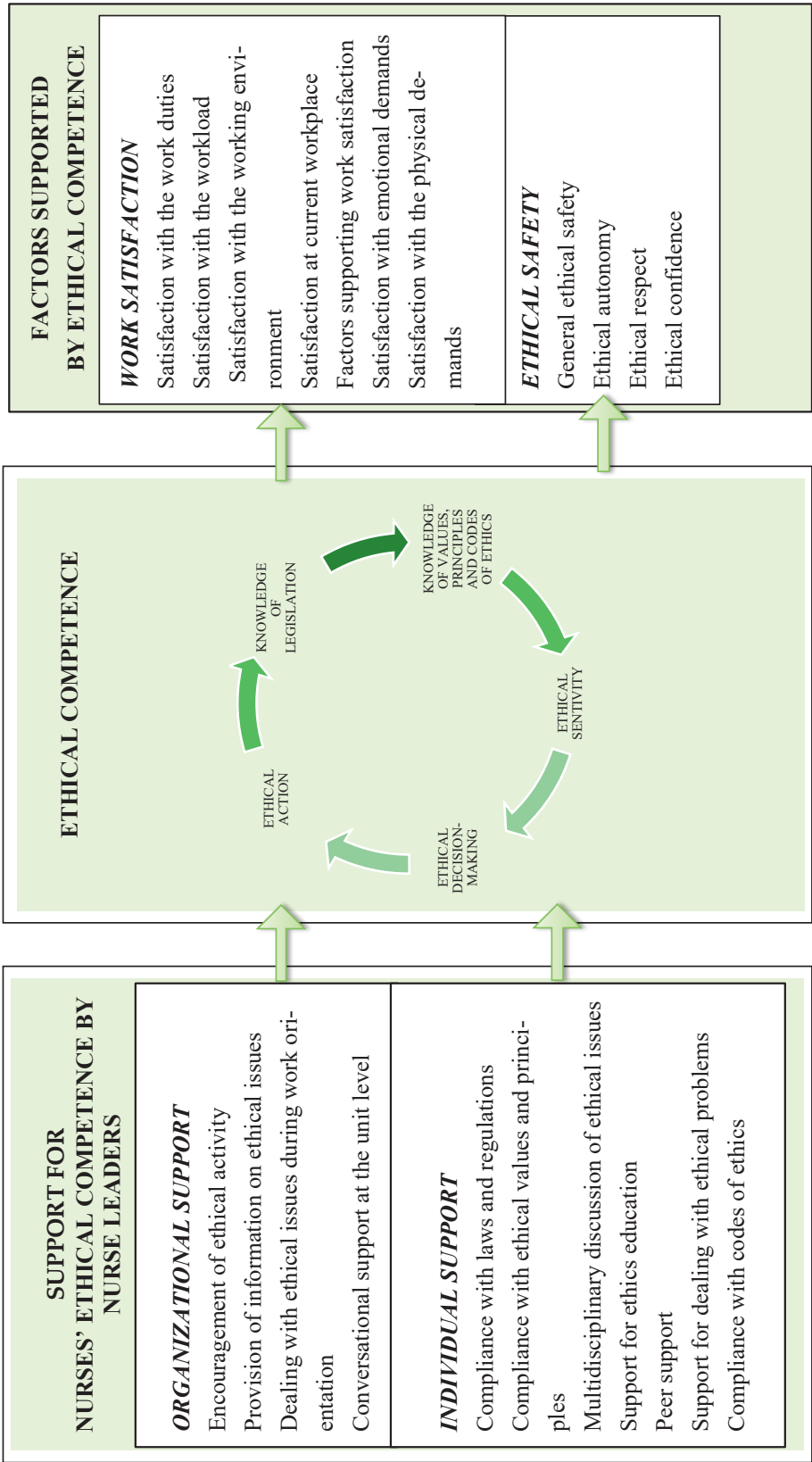Ethical confidence

Figure 4   The main concepts along with their proposed relationships

3 RESEARCH AIMS

The research underlying this thesis aimed to analyze support for nurses' ethical competence from the perspective of both nurses and nurse leaders. The aim of the first phase was to analyze nurse leaders' support for nurses' ethical competence, as well as search the theoretical and empirical literature for relevant definitions and instruments. The second phase of research addressed the development and testing of the Ethical Competence Support (EthiCS) instrument, with an additional objective of analyzing the relationship between organizational support (OSEC), individual support (ISEC) and nurses' ethical competence. Analyses were also extended to the relationship between nurses' ethical competence, ethical safety and work satisfaction. The ultimate goal was to combine existing and new knowledge in the field of professional nursing ethics for how nurse leaders can support nurses' ethical competence, improve nurses' ethical safety and enhance work satisfaction based on hypothetical model of support for nurses' ethical competence, ethical safety and work satisfaction. The research questions were:

Support for nurses' ethical competence

1. What is nurses' ethical competence? (Paper I, III)

2. What was support for nurses' ethical competence? (Paper I)

3. How was organizational and individual support for nurses' ethical competence realized in practice? (Paper II, III)

Factors supported by ethical competence

4. How were nurses' ethical safety and work satisfaction realized? (Paper IV)

Relationships between organizational and individual support, nurses' ethical competence, ethical safety and work satisfaction

5. How was organizational and individual support related to nurses' ethical competence, ethical safety and work satisfaction? (Paper IV, summary)

To examine the relationships between organizational and individual support nurses' ethical competence, ethical safety and work satisfaction, a hypothetical model (Gigliotti & Manister 2012, Polit & Beck 2006) for determining the relationships between these factors was developed (Figure 4 and 5). In this model, organizational and individual support for nurses' ethical competence were the independent variables, nurses' ethical competence was the mediator variable, and ethical safety and work satisfaction were the dependent variables. The research underlying this thesis identified the following four hypothetical relationships between organizational support, individual support, nurses' ethical competence, ethical safety and work satisfaction. The hypotheses were as follows:

Hypothesis 1: The higher the support at the organizational level, the higher nurses' ethical competence.

Hypothesis 2: The higher the support at the individual level, the higher nurses' ethical competence.

Hypothesis 3: The higher nurses' ethical competence, the higher work satisfaction

Hypothesis 4: The higher nurses' ethical competence, the higher ethical safety

OSEC = organizational support for nurses' ethical competence; ISEC = individual support for nurses' ethical competence; ECO = nurses' ethical competence; WSA = work satisfaction; ESA = ethical safety
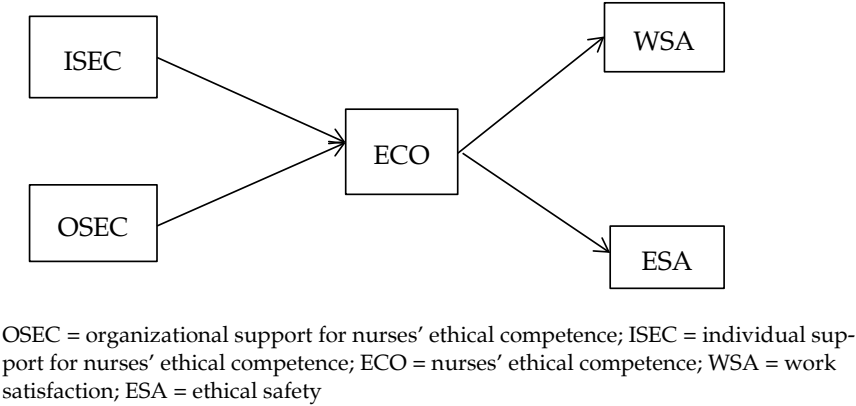
Figure 5   Hypothetical model of support for nurses' ethical competence supporting ethical safety and work satisfaction

4   MATERIALS AND METHODS

This thesis presents research from a two phase study. In the first phase, four literature reviews (Grant & Booth 2009) were conducted (Paper I-IV, Summary) and data regarding how nurse leaders support nurses' ethical competence during recruitment and performance reviews were collected. The second phase concentrated on the development of the Ethical Competence Support (EthiCS) instrument, Ethical Competence instrument, Ethical Safety instrument along with their empirical testing using data collected from nurses and their nurse leaders. Furthermore, the hypothetical model developed specifically for this research was tested. A summary of the design, sampling, data collection and instruments employed in phases I and II are presented in Table 9.

4.1   Design, setting and sampling

A quantitative, descriptive design was used to gain information about nurses' ethical competence, support for nurses' ethical competence and the factors supported by ethical competence (ethical safety and work satisfaction). During Phase I, three systematic reviews and one mixed-method systematic review (Harden & Thomas 2005), were used to identify relevant definitions and instruments. A descriptive study design was chosen as one of the research aims was to develop conceptual and operational definitions for the main concepts covered in the study (Grant & Booth 2009, Gigliotti & Manister 2012) and correlational design examining the relationship among variables (Polit & Beck 2006). During phase I, empirical data were collected using a descriptive cross-sectional design (Paper II). Phase 2 employed descriptive and explorative cross-sectional correlational survey design to assess the relationships between organizational and individual support, nurses' ethical competence, ethical safety and work satisfaction (Papers III, IV).

Study settings included both specialized healthcare and primary healthcare so that the research would include adequate participants and reflect diverse nursing specialties (Shorten & Moorley 2014). In phase I the study was carried out in two university hospitals representing two healthcare districts in Finland (Paper II), and included internal medicine, surgery, psychiatry, obstetrics and gynecology, intensive care, emergency care and pediatrics units. Phase II investigated specialized healthcare, primary healthcare, private healthcare or other facilities (Paper III and IV), including hospital inpatient and outpatient units, health center wards as well as health center outpatient units, home services and home nursing care, institutional care, residential care and other private and official health care units.

Table 9   Summary of design, sampling, data collection and instruments used in phases I and II

Phase, years	Design	Setting	Sampling, sample	Instruments	Data collection
I 2009 - 2013	Three literature reviews and one mixed-method systematic review	Electronic databases: MEDLINE, CINAHL Nursing Database British Nursing Index	Systematic sampling, Studies meeting inclusion criteria: – support during recruitment and performance reviews (n = 31) – OSEC and ISEC (n = 34) – ethical safety (n = 33) – work satisfaction (n = 14)	Data extraction grid	Systematic literature searches guidelines of the Centre for Reviews and Dissemination (CRD)
	Descriptive, cross-sectional survey design	two university hospitals in two healthcare districts in Finland	representative, random sampling of nurse leaders (N = 539, n = 198)	EthiCS version I[1], 44 items	An online structured questionnaire
II 2013 – 2017	Cross-sectional and correlational design	specialized healthcare, primary healthcare, private healthcare or other facilities	systematic, random sampling of nurses (N = 1100, n = 298) and nurse leaders (n = 193)	EthiCS version II[1], 48 items Ethical competence instrument[1], 27 items Ethical safety instrument[1], 11 items Work satisfaction instrument[2], 7 items	A self-administered postal survey Structured questionnaire with open-ended questions

[1] Developed for this study
[2] Modified for this study

Both nurse leaders and nurses were considered relevant participants in terms of accurate representation the population and study generalizability (Polit & Beck 2010). In phase I, the target sample included nurse leaders (n = 539), consisting 66 directors of nursing and 473 nurse leaders in two university hospitals, who had been identified through representative, random sampling. A total of 198 responses were obtained, reflecting a response rate of 37% (Paper II).

Phase II employed systematic sampling of nurses (N = 1100) from the Finnish Nurse Association member registry with specific inclusion criteria (see Paper III). On the list every 16th member was selected based on the desired sample size (Hayat 2013). Sample size was calculated by an expert statistician (JK) to be comfortably more than 296 (90% power, effect size of 0.5 and significance level of 0.01), which was the threshold sample size required for the planned statistical analyses according to power analysis (Hayat 2013, Gaskin & Happell 2014). Nurses were asked to send additional questionnaires to their immediate nurse leader (N = 1100) at the unit level by mail or internal post. These questionnaires were coded by running numbering in order to later combine the data for comparison. In total, 298 nurses and 166 nurse leaders responded to the questionnaire, representing response rates of 26% and 16%, respectively. The response rate for nurse leaders is based on an estimated total sample size (N=1100), as there is not concrete information on how many of the 298 nurses sent the questionnaire to their immediate nurse leader. 39% (n = 117) of nurse respondents and 41% (n = 68) of nurse leader respondents made written comments in open ended questions.

4.2   Instruments

The research underlying this thesis measured organizational and individual support for nurses' ethical competence with the Ethical Competence Support instrument (EthiCS). It was developed for the purpose of this study (Rattray & Jones 2007), and was used in both the phase I (Appendix 4) and further developed version (Appendix 5) in the phase II. In phase II, three separate instruments - the Ethical Competence Instrument, the Ethical Safety Instrument and a modified Work Satisfaction Instrument (TTK, The Centre for Occupational Safety) – were used to measure ethical competence, ethical safety and work satisfaction, respectively. The development of the instruments for evaluating nurses' ethical competence and ethical safety was based on what was learned from two literature reviews (paper II, III and IV, summary). Suggestions from an expert panel guided the development of instruments for assessing organizational and individual support, nurses' ethical competence and ethical safety.

The background factors included in phase I were age, gender, job position, work experience, management experience, employment status (temporary/permanent) and the number of ethical issues that the nurse leaders dealt with during their most recent education. In phase II, the background factors were age, job position, gender, highest educational degree, service area in social and health services, current work unit, work experience, management experience (only from nurse leaders), number of employees in organization, working years in healthcare and current work position, and amount of ethics education (credits) in their recent education. Respondents were asked with whom and how often they talk about ethical issues (conversational support), as well as what kind of organizational ethics activities are available and whether they participate in them. The last question was an open-ended question in which respondents were asked to freely describe support for their ethical competence and what might affect it.

4.2.1 Ethical Competence Support instrument (EthiCS)

A new instrument for measuring nurses' and nurse leaders' perceptions about support for nurses' ethical competence was developed based on literature reviews and deductive reasoning. This instrument was developed because no existing approach for measuring ethical competence, related to either human resource management or organizational and individual support, was identified.

In phase I, a two-part Ethical Competence Support instrument (EthiCS version one, Appendix 4) focused on two aspects of support, namely, support during recruitment and performance reviews. EthiCS version one consisted of eleven sum variables (Table 8).

The first part of the instrument (12 items) used three sub-scales to measure how often nurse leaders supported nurses' ethical competence during recruitment. The second part of the instrument (32 items) used eight sub-scales to measure how often nurse leaders supported nurses' ethical competence during performance reviews. Both parts employed a five-point Likert scale (often=5; fairly often=4; rarely=3; seldom=2; never=1). Cronbach's α scores were calculated for each sub-scales (Table 1, publication II) to assess the internal consistency of the scales (DeVon et al. 2007), with the alphas ranging from 0.68 - 0.84.

Table 10   Structure of EthiCS used in phase I

Sum variables	Items	Scale options
Part 1. Supporting nurses' ethical competence during recruitment	12	1= never 2 = seldom
Ensuring adequate knowledge of values and principles	4	3 = rarely
Assessment of ethical behaviour	4	4 = fairly
Reflection about values and principles	4	often
Part 2. Supporting nurses' ethical competence during performance reviews	32	5 = often
Acting according to values and principles	4	
Acting according to regulations and laws	4	
Acting according to personal professional codes	4	
Ethical behavior during ethical conflicts	4	
Collegiality	4	
Compliance with ethical guidelines	4	
Cooperation with other professional groups	4	
Assessment of nurse's need for ethics education	4	

In phase II, the instrument was modified based on a literature review (Paper II), and expert panels (see 4.1.) to create EthiCS version two. Careful conceptualization ensured content validity (Wynd et al. 2003), while the relevance of item content was evaluated through expert assessment. The preliminary second version of the instrument was evaluated by an expert panel comprising five postgraduate students or post doc researchers enrolled in the "Value Basis and Ethics in Nursing" research program at the department of Nursing Science in the University of Turku (expert panel Ia) and five ethics educators (expert panel Ib). A second expert panel consisting of four nurses and four nurse leaders also assessed the instrument. Both expert panels evaluated each item of the EthiCS from two perspectives; relevance was judged using a four-point Likert scale: 1) not relevant; 2) somewhat relevant; 3) quite relevant; and 4) highly relevant, whereas item clarity was scored using a previously presented four-point Likert scale (Lynn 1986, Wynd et al. 2003). In this way, both panels provided a content validity index, I-CVI, for individual items (Appendix 6).

A two-part instrument (Table 9) was designed to measure support for nurses' ethical competence at the organizational (OSEC) and individual (ISEC) levels. This version of EthiCS consisted of 11 sub-scales (Table 11). The OSEC part contained 27 items organized under four themes while the ISEC part contained 21 items organized under seven sub-scales (three items in each). Participants perceptions' of support for ethical competence were gauged using a five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree) (Gliem & Gliem 2003). Cronbach's α scores were calculated (DeVon et al. 2007) for the instruments (i.e. EthiCS versions one and two) used in phases I and II to certify the internal reliability of the scales (Table 2 in publication

III; Table 2 in publication IV). Scores on EthiCS can be classified according to the positive agreement percentage (PAP) as low support (PAP < 50%), average support (PAP 51% -75%) or high support (PAP = > 75%). The positive agreement percentage (PAP) was calculated at the item and sub-scale levels based on the amount of 'strongly agree' and 'agree' responses. Internal consistency reliability (Cronbach's α) for OSEC ranged from 0.85 - 0.88 (nurses' data) and 0.76 - 0.81 (nurse leaders' data). The Cronbach's α scores for ISEC ranged from 0.80 - 0.91 (nurses' data) and 0.6 - 0.84 (nurse leaders' data).

In phase II, a descriptive, cross-sectional study design was used to test EthiCS version two. The instrument was pilot-tested using a sample of 110 nurses from the Finnish Nurse Association member registry (n = 32), along with their nurse leaders (n = 15). The functionality of the instrument was evaluated from four perspectives using a dichotomous (yes/no) scale: clarity of the cover letter for respondents; response instructions; and clarity of the items. If the respondents answered 'no' to any of these questions, they were asked to clarify, in writing, what was unclear and why they found it unclear. In addition, respondents were asked to specify how long it took to fill the questionnaire. All of the respondents (100%) assessed the cover letter and response instructions to be clear. A majority of nurses (65%) and nurse leaders (87%) found the items clear. Based on the comments, the order of items was changed in part F, response options for two items measuring background factors were clarified, and the rating scale in question 14B was checked. The instrument was generally considered relatively long (8 pages) and demanding to respond to, average response time was 27 minutes among nurses and 23 minutes among nurse leaders. However, it was also considered important and exhaustive.

Table 11   Structure of EthiCS in phase II

Sum variables	Items	Scale options
Organizational Support for nurses' Ethical Competence (OSEC)		1 = strongly disagree
Encouragement of ethical activity	7	
Provision of information on ethical issues	6	2= disagree
Dealing with ethical issues during work orientation	7	3 = neither
Conversational support at the unit level	7	agree nor disagree
Individual Support for nurses' Ethical Competence (ISEC)		
Compliance with laws and regulations	3	4 = agree
Compliance with ethical values and principles	3	5 = strongly
Multidisciplinary discussion of ethical issues	3	agree
Support for ethics education	3	
Peer support	3	
Support for dealing with ethical problems	3	
Compliance with codes of ethics	3	

4.2.2 Ethical Competence instrument

A literature review during phase I aimed to identify instruments that are relevant for measuring nurses' perceptions of their ethical competence. Nurses' ethical competence as a concept is abstract and therefore it was operationalized based on components (see figure 2. and table 12), including the basic components of competence. A number of instruments focused on only one component of nurses' ethical competence (Appendix 7). For example, the identified instruments focused either on ethical reasoning, ethical sensitivity, professional values or ethical problems. None of the identified instruments integrated all the components of ethical competence (knowledge of laws and regulations, values, principles and codes of ethics, ethical sensitivity, ethical decision-making, ethical action); therefore, a new instrument was developed for this study. The framework for ethical competence presented by De Schrijver & Maesschalck (2013) was modified, as the research underlying this thesis considers ethical competence to include ethical behavior and actions that require knowledge of legislation, values, principles and codes of ethics (Table 10). This type of competency allows nurses to recognize and confidently address ethical problems. I-CVI was calculated for each item and, in each case, fulfilled the minimum criteria for agreement (Appendix 6). Moreover, internal consistency reliability (Cronbach's α) was found to be satisfactory, (nurses data: 0.78 - 0.90; nurse leaders data: 0.75 - 0.89).

Table 12   Structure of the Ethical Competence instrument

Sum variables	Items	Scale options
Knowledge of legislation	7	1 = strongly disagree
Knowledge of values, principles and codes of ethics	6	2 = disagree 3 = neither agree nor
Ethical sensitivity	5	disagree
Ethical decision-making	5	4 = agree
Ethical behavior and action	4	5 = strongly agree

4.2.3 Ethical Safety instrument

To investigate nurses' perceptions of their ethical safety, a new instrument was generated based on a literature review (see background 2.1.). As for EthiCS and Ethical Competence instruments, the content validity index, I-CVI, of individual items was calculated after each panel review of the Ethical Safety Instrument, showing a minimum of 1.00 for 3 to 5 experts and a minimum of 0.75 for 6 to 10 experts (Appendix 6). Internal consistency reliability (Cronbach's α) was judged to be satisfactory (nurses' data: 0.77 - 0.92).

Table 13   Structure of the Ethical Safety instrument

Sum variables	Items	Scale options
General ethical safety	2	1 = strongly disagree
Ethical autonomy	3	2 = disagree
Ethical respect	3	3 = neither agree nor disagree
Ethical confidence	3	4 = agree
		5 = strongly agree

4.2.4 Work Satisfaction instrument

The fourth literature review aimed to identify instruments for measuring nurses' work satisfaction. Despite the good validity of some of the identified instruments, the length of EthiCS and these instruments motivated researcher to use a shorter national instrument. This instrument included seven items that had been modified from the national Work Satisfaction Instrument with permission from the national Centre for Occupational Safety. These items formed one sum variable, which showed good internal consistency reliability (nurses data= 0.86).

Table 14   Structure of the Work Satisfaction instrument

Items	Items	Scale options
Satisfaction with the work duties	1	1 = strongly disagree
Satisfaction with the workload	1	2 = disagree
Satisfaction with the working environment	1	3 = neither agree nor
Satisfaction at current workplace	1	disagree
Factors supporting work satisfaction	1	4 = agree
Satisfaction with the emotional demands	1	5 = strongly agree
Satisfaction with the physical demands	1	

4.3   Data collection

In phase I, four reviews were conducted to identify, evaluate and synthesize scientific knowledge (CRD 2009) about nurses' ethical competence as well as the support for nurses' ethical competence, ethical safety and work satisfaction. All of the reviews were based on a systematic search using well-defined search terms (Wilczynski & Haynes 2004), inclusion and exclusion criteria, and a wide range of databases to control selection bias (Jadad et al. 1998, Grant & Booth 2009). In the mixed-method (Harden & Thomas 2005) systematic review regarding organizational and individual support for nurses' ethical competence (Paper I), two inde-

pendent reviewers (ON and TP) chose studies and evaluated their quality to minimize selection bias (Higgins & Green 2011, CRD 2009). Moreover, the quality appraisal of included studies was conducted with commonly used quality appraisal tools (Tong et al. 2007, Von Elm et al. 2007, Liberati et al. 2009). Methodological issues in combining different study types in a systematic review were acknowledged and discussed. Furthermore, the data extraction employed self-developed templates, with the findings summarized under thematic headings using tables (Whittemore & Knafl 2005, Thomas & Harden 2008).

Data collection during phase I employed a structured online web questionnaire (Webropol®), and was conducted in autumn 2009 at two university hospitals in two hospital districts in Finland. The researcher informed the purpose of the research, the voluntary nature of participation, and the confidentiality of the data. In phase II, data were collected via posted questionnaires during four weeks in May 2014. All of the participants received a letter including the same information as was provided in phase I. Participants' responses were transferred to an Excel table by the researcher (TP), with data entry carefully checked. Incompletely filled questionnaires were omitted (n =1), and questionnaires from non-target respondents (working as a teacher, instrument nurse or laboratory technologist) were rejected (n = 4).

4.4   Data analysis

All of the data analysis methods were selected with the overarching objective of addressing the study questions as well as establishing statistically significant relationships based on objective measurements and correlations (Polit & Beck 2006, Conneely & Boehnke 2007).

In phase I, the data was analyzed using SPSS software (version 16.0; IBM, Armonk, NY, USA). Descriptive statistics, the mean values of sum variables and frequencies were used to describe the basic data. The Wilcoxon two-sample test was used to compare the distributions of the categorical variables. The associations between background variables and single items were examined using Pearson's chi-square test (Polit & Beck 2006). The analysis was challenged by certain items receiving a low number of responses, as well as the questionnaire including two scales that were scored in the opposite order. Hence, for this analysis, scale categories were combined from a five-point (1= never, 2 = seldom, 3 = rarely, 4 = fairly often, 5 = often) into a three-point scale (often, rarely, never). Sum scores were formed by calculating the mean values of single items.

In phase II, data analysis was performed using SPSS software (version 21.0; IBM, Armonk, NY, USA). The data analysis methods employed included descriptive statistics (paper III, IV), multifactor analysis of variance (Paper III) and linear regression analysis (Paper IV). Participant characteristics and sum scales were reported using frequencies, percentages, mean values, and standard deviations (SD). For the statistical analysis, the eight options in the background question covering education were combined into three options (vocational, polytechnic, university). The positive agreement percentage (PAP) was calculated at the item and sum variable level from the number of 'strongly agree' and 'agree' responses.

Multifactor analysis of variance was used to examine relationships of background factors on sum variables (main effect model: continuous variables were used as covariates and categorical variables were used as fixed factors). However, no statistically significant associations were detected. The Sidak adjustment was used to correct for multiple comparisons in pairwise comparisons (Conneely and Boehnke 2007). Linear regression analysis was used to analyze the extent to which OSEC and ISEC explained variation in nurses' ethical competence, ethical safety and work satisfaction. Results were considered to be statistically significant when p-values < 0.05 (Polit & Beck 2006, Conneely and Boehnke 2007), and were complemented with relevant graphics (paper II, III and IV).

Furthermore, testing the hypothesized model (see Figure 5) of nurse leaders' organizational and individual support in relation to nurses' ethical competence, ethical safety and work satisfaction was tested using path model analysis (Suhr 2018). Mplus software (version 7.11; Muthén & Muthén, Los Angeles, CA, USA) and the maximum likelihood estimation were used to create a path model. The chi-square statistic (x^2), root mean square error of approximation (RMSEA), and ratio of chi-square to degrees of freedom were used to assess model fit. Certain additional goodness-of-fit indices, such as CFI and TLI, were computed. Following the recommendations of Suhr (2018) with regards to goodness-of-fit (CFI), Tucker-Lewis Index (TLI) and RMSEA, values above 0.90 indicate good model fit while values above 0.95 indicate excellent fit.

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Table 15 Data analysis and statistical tests used in Phases I and II

Purpose	Statistical test	Phase/paper
To describe background factors, mean scores of sum variables and total scores	Descriptive statistics, more specifically, frequencies, percentages, mean values, standard deviation (SD)	Phase I/ Paper II Phase II /Paper, III and IV
To describe how many nurses and nurse leaders agree positively about OSEC and ISEC at the item and sum variable level	Descriptive statistics and positive agreement percentage (PAP)	Phase II/Paper III and IV
To compare the distributions of the categorical background factors	The Wilcoxon two-sample test	Phase I / Paper II
To identify relationsships between the background variables and single items	Pearson's chi-square test	Phase I / Paper II
To identify relationsships between the sum scores and background variables	One-way analysis of variance, followed by multiple comparisons using either Tukey's or Tamhane's test.	Phase I / Paper II
To identify differences between nurses' and nurse leaders' perceptions of organizational ethics support	Sidak adjustment for multiple comparisons	Phase II/ Paper III
To examine relations between background variables and the ethical competence, ethical safety, support and work satisfaction	Multifactor analysis of variance (MANOVA)	Phase II/ Paper III
To analyze how OSEC and ISEC levels is related to nurse's self-reported ethical competence, ethical safety and work satisfaction.	Linear regression analysis	Phase II/ Paper IV
Verification of the proposed relationships between 1) OSEC and ethical competence 2) ISEC and ethical competence 3) ethical competence and ethical safety 4) ethical competence and work satisfaction	Path model (Maximum likelihood estimation) analysis using path coefficients, the chi-square statistic ($x2$), Comparative fit index (CFI), Tucker-Lewis Index (TLI), and Absolute fit index (RMSEA)	Summary

Written data from the open-ended survey questions were analyzed using qualitative content analysis applying a directed approach (Hsieh & Shannon 2005). In the first step of the analysis, answers were entered into a matrix. Based on the research questions and theoretical framework, operational definitions were compared and compounded. A researcher (TP) read through every answer and coded meaningful units, which could be words, phrases, sentences or even paragraphs, into explicit categories (Graneheim & Lundman 2004, Fereday & Muir-Cochrane 2006). After coding, the researcher determined the extent to which the data reflected the operational definitions and summarized how the findings validated the theoretical framework.

4.5   Ethical considerations

All phases of the research presented in this thesis were conducted according to established international and national ethical research guidelines (ETENE 2001, EU 2013, TENK 2013). Moreover, ethical issues were taken into account during both the planning and implementation of the research. The selection and justification of the research topic and research questions were carefully considered from the ethical point of view (see Glasziou et al. 2014). A systematic review of previous studies revealed that research results are fragmented, which justified the presented research as it addresses the lack of knowledge regarding ethical competence among nurses and the associated support activities by nurse leaders. Therefore, the research underlying this thesis provides discipline-specific evidence that can serve as the basis for further research and the development of clinical practices. Ethical approval for the study was obtained from two university hospitals in two healthcare districts (Phase I). The research in phase II was approved by The Ethics Committee of the University of Turku (Statement 11/2014) and permission for collecting data from The Finnish Nurses Association member registry was obtained (Board decision 6.6.2014).

Participants in each phase received written information about the purpose of the study, voluntary participation, assurance of anonymity, confidentiality and data coding and storing procedures (CORDIS 2011). When the web questionnaire was utilized (Phase I), all of the responses were gathered in an online system (Webropol®) that had password-protected access restricted to only the principal researcher. Answering the questionnaire was considered as informed consent to participate (phase I and II). A personal data register was not required because any stage of the research did not deal with participants' personal data (Personal Data Act 523/1999). The instruments did not include any personal or sensitive questions nor did the questions require professionals to break their vow of confidentiality.

Valid and reliable data collection and instruments are essential to supporting ethical research (Redman 2014). Statistical issues, such as power calculations to ensure appropriate sample size, were considered early in the design of a study so that the necessary information would be available for evaluating ethical data analysis conduct. In the data analysis phase, methodological issues (for instance, response rate and instrument development) were clarified in the methods and discussion to ensure that no data fabrication or falsification had occurred (Altman 1980). Clear operationalization of instruments is statement of ethical research professionalism (Redman 2014)

Methodological considerations are an essential part of ethical research conduct (Roberts et al. 2009 Glasziou et al. 2014). Therefore, phase II included a review by an ethical committee (Committee of the University of Turku, Statement

11/2014). Furthermore, the manuscript process for publications I-IV included a peer review of the statistical analysis methods. All of the analytical approaches employed in the research underlying this thesis were chosen for their ability to provide evidence that would answer the main research questions. (Tully et al. 2009)

The ethical considerations for data handling and storage as well as publishing were based on ethical standards in data storage and ensured that the researchers would avoid any publishing misconduct (COPE 2017). The data (paper and electronic) were stored according to ethical guidelines for safe storage and anonymity. All of the written material obtained from participants was treated with respect and their privacy in research publications was taken into account by not publishing any personnel information. The risk of identification was evaluated before any samples or quotations were published. Data will not be destroyed after the presented research is published and this doctoral is accepted, but will nevertheless be maintained securely (Roberts et al. 2009).

Furthermore, the work and achievements of other researchers was respected by citing their publications appropriately. Two publications arising from phase II study were identified as such and the primary publication was referenced according to publications ethics. Relevant copyright permissions were obtained from the copyright holders, i.e. various journals (COPE 2017). The contributions of other researchers to research design, data collection and data analysis were specified in the published articles. The main researcher (TP) was responsible for covering all of the financial costs associated with the presented research and, as such, there were no expenses for the participants or studied organizations. Sources of financing, conflicts of interest or other commitments relevant to the research were reported when publishing the research results (Paper I, II, III and IV).

5   RESULTS

This chapter will introduce the main findings of the research underlying this thesis, while more detailed results can be found in the original papers (I-IV). The results of the four reviews were reported in the "Background" chapter of this thesis (see 2.1), and are also presented in the original publications (Paper I –IV). The empirical results are presented according to the study phases and research questions. In this way, results regarding nurses' ethical competence and support for nurses' ethical competence (Paper I, II, III) are presented first. The summary also includes previously unpublished material; namely, results covering conversational support on ethical issues, organizational ethics activities and participant responses to the open-ended questions. This is followed by results describing how ethical safety and work satisfaction are supported by ethical competence (Paper IV). The influence of organizational and individual support on nurses' ethical competence, ethical safety and work satisfaction (Paper IV) is described next, while a hypothetical model for the relationships between these factors is introduced in the summary (Figure 5).

5.1   Support for nurses' ethical competence

This section begins by describing the empirical results concerning nurses' ethical competence. Next, support for nurses' ethical competence is reported from both nurses' and nurse leaders' viewpoints, including descriptions of organizational ethics support activities, how often nurses reporting receiving conversational support and written responses from open-ended questions.

5.1.1   Nurses' ethical competence

The results show that, nurses perceived their ethical competence as average (see Table 2, paper III). The components that received the highest scores (Appendix 8) were ethical action (PAP = 90.0%, Mean = 4.27, SD =0.52) and ethical reflection (nurses: PAP = 76.0%, Mean =4.03, SD = 0.59). Nurses reported their ethical decision-making (PAP = 51.0, Mean = 3.70, SD = 0.67) skills to be at average level. In terms of weaknesses, nurses did not feel that they were able to clarify the law and regulations involved in ethical conflicts (Mean =3.4; SD = 0,94), identify alternative solutions for ethical problems (Mean = 3.6; SD = 0,83) or define the ethical consequences of alternatives (Mean = 3.6; SD = 0,79). At the item level nurses

assessed the lowest knowledge of ethics codes for physicians (Mean = 2.8; SD = 0.88) and practical nurses (Mean 2.9; SD = 0.06).
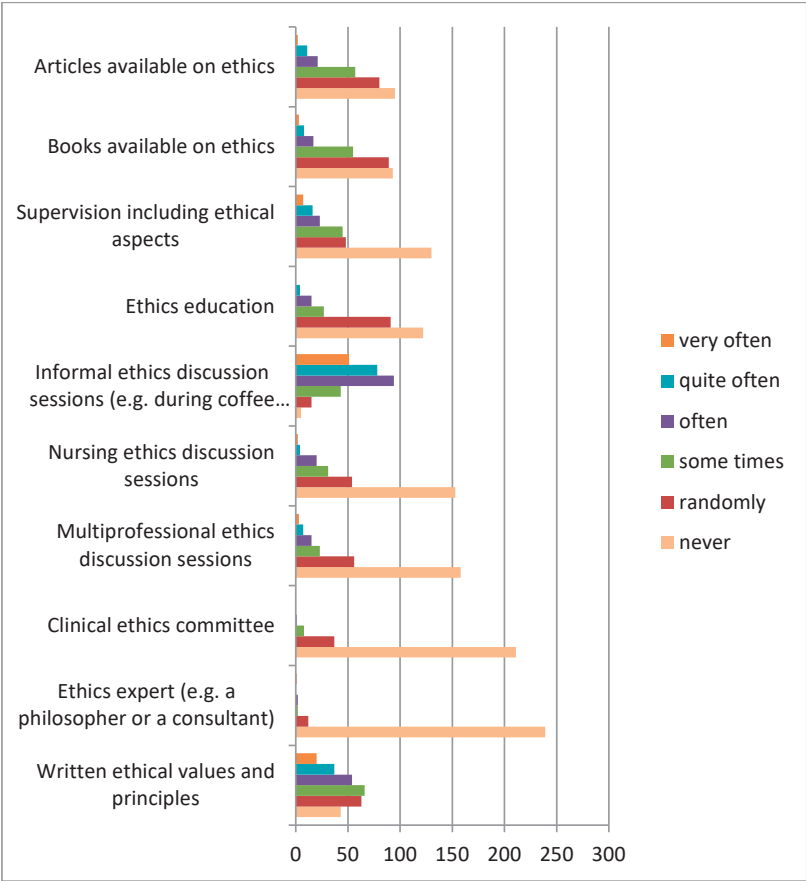
5.1.2   Nurses' perceptions of support for their ethical competence

Nurses' perceptions of support for their ethical competence were measured in phase II. Nurses reported experiencing conversational support on ethical issues (Appendix 9) weekly (52%) or daily (22%). A minority of nurses also discussed ethical issues with their nurse leaders (22%) and doctors (26%) each week. Only a few nurses stated that they had never discussed ethical issues with their nurse leaders (6%) or doctors (6%). Nurses reported discussing ethical issues with other professionals, such as social workers, priests or physiotherapists, less often than with their nurse colleagues. At the organizational level, nurses reported informal ethics discussions (96%) and written ethical values and principles (80%) to be the most common ethical support activities (Figure 6), with 75% of nurses stating that they used these forms of support often or very often. In contrast, 30% of nurses stated that ethics education was not available and they rarely participated in ethics education (Figure 7).
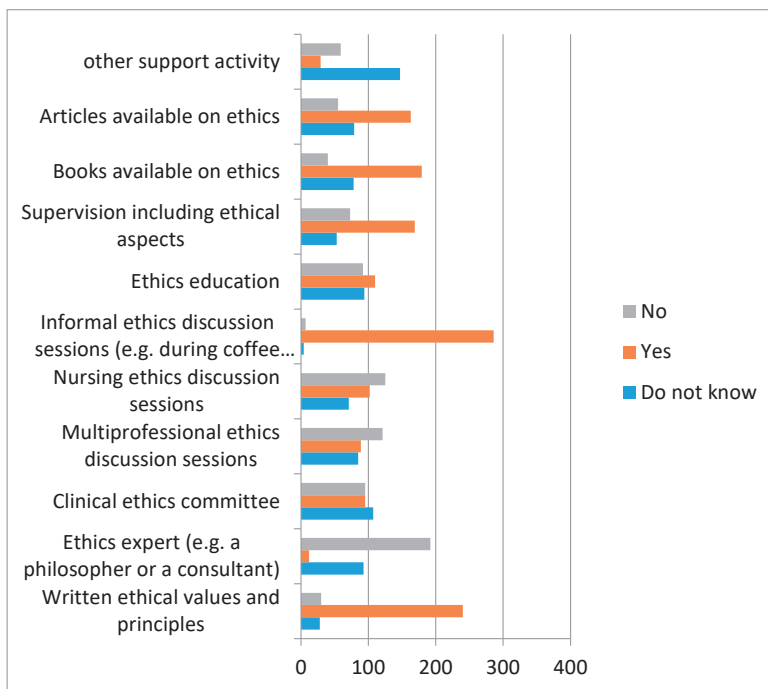
The x-axis showing the number of responses from participating nurses.

Figure 6   Availability of organizational ethics support activities

The x-axis showing the number of responses from participating nurses.

Figure 7   Use of organizational ethic support activities

In general, nurses perceived a low level of organizational support for their ethical competence (PAP = 44.5%, table 3, III). Nurses felt (Appendix 10) that encouragement for ethical behavior mostly consisted of being required to act in accordance with the laws and regulations (mean = 4.71; SD = 0.55) as well as with common values and principles (mean = 4.40; SD = 0.72). They also stated that information on ethical issues mostly consisted of the organizational notifications about changes in the law or regulations (mean = 4.09; SD = 0.89). At the item level, components of organizational support for ethical competence that received the lowest scores were participation in ethics education during work orientation (mean = 2.37; SD = 1.015), discussion about what topics should be included in ethics education (mean = 2.37; SD = 0.96) and familiarization with how to handle ethical

problems during orientation (mean = 2.42; SD = 0.95). At the sum variable level, support in dealing with ethical issues during orientation received the lowest PAP score from nurses (PAP = 31.85%). One background factor was found to be associated with nurses' perceptions of organizational support, namely, nurses working in large organizations (over 1,000 employees) felt that they had received more information on ethical issues than nurses working in small organizations (Paper III, table 5).

Nurses felt that they received less individual support for their ethical competence (PAP = 38%, table 3, III) than organizational support. Compliance with laws and regulations (PAP = 57.0%) and with ethical values and principles (PAP = 52.7%) was estimated as average. Half of the nurses responded (Appendix 11) that individual support for dealing with ethical problems mostly consisted of receiving feedback on how ethical problems are dealt with (mean = 3,28; SD = 1,17). Compliance with codes of ethics was mainly ensured by feedback on treatment of patients according to codes of ethics (mean = 3.30; SD =1.19). A majority of the nurses disagreed that they received support for ethics education (PAP = 15.8%). Associations between education and compliance with laws and regulations, as well as between the number of employees in a work unit and compliance with ethical values and principles, were found (Table 5 in paper III).

Based on responses to the open-ended questions (Appendix 12), nurses felt that organizational support through conversation functioned well at the unit level, as ethical issues were discussed during unit meetings (RN14, RN80), coffee breaks (RN16, RN80) and debriefing meetings (RN112). Nurses stated that they received information on ethical issues via emails (RN20) and intranet pages as well as during discussions and unit meetings (RN80). Moreover, nurses reported that they were especially well informed about patients' rights along with the creation and storage of patient records and other healthcare data (RN77). Nurses' felt positively encouraged to act ethically. They also stated that they had opportunities to develop their ethical practices (RN72, RN80). One nurse expressed that is was possible to take responsibility and action towards ethical issues at the unit level (RN99). However, only a few nurses mentioned discussing ethical issues during work orientation. Nevertheless, laws and regulations (RN67), along with ethical values and principles (RN80, RN86), were covered during orientation and written material on these subjects was also available (RN80).

Nurses' perceptions about individual support were not as positive (Appendix 13). Most positive perceptions concerned peer support and support for dealing with ethical problems. Conversational collegial support was mentioned most often (RN5 RN6, RN36, RN66, RN114, RN103), and concerned finding solutions to ethical issues and nurses' reflection of ethical conflicts. According to the nurses,

nurse leaders provided support for dealing with ethical problems when necessary (RN44, RN71 RN85, RN91 RN105, RN108, RN114).

Answers to the open-ended questions revealed that nurses predominantly perceived support at the individual level negatively. They felt that compliance with laws and regulations was not supported because of an inadequate number of nurses on staff, insufficient time for care (RN53) and/or low appreciation of nurses (RN51, RN65). They stated that they were not able to carry out their ethical responsibilities according to laws and regulations (RN53, RN65), as well as that management did not provide support for this problem (RN49). Furthermore, they stated that laws and regulations were only discussed once a mistake had happened, after which management gave the staff negative feedback (RN52, RN80). Support for compliance with ethical values, principles and codes of ethics (RN26, RN32, RN79, RN105) was also mostly described in a negative light. Nurses felt that they were not supported to act according to ethical values and principles due to an inadequate amount of nursing staff (RN53), insufficient time for care (RN35, RN38, RN40), the organization's financial situation (RN48) and negative stance toward healthcare (RN76) Some of the nurses who worked in units that valued ethical principles and included a good working environment perceived compliance with codes of ethics positively (RN61). Furthermore, nurses felt that multidisciplinary discussions of ethical issues occurred rarely (RN10, RN16) and should be arranged more frequently (RN12, RN16, RN18). In addition, nurses reported few opportunities for ethics education (RN1), and many nurses stated that their professional education had not provided enough knowledge for sufficient ethical competence and actions (RN8, RN14, RN64, RN68, RN70, RN95).

5.1.3   *Nurse leaders' perceptions of support for nurses' ethical competence*

Nurse leader's perceptions of support for nurses' ethical competence were measured in both phases I and II. This section will start by reporting the results from phase I regarding support during recruitment and performance reviews. This is followed by a description of nurse leaders' perceptions of organizational and individual support for nurses' ethical competence, and includes results from the open-ended questions.

Results from phase I showed that perceptions of support varied greatly between different stages of recruitment (Table 3, Paper II). Almost 60% of nurse leaders ensured a potential nurse's knowledge of ethical values and principles by using them as selection criteria (mean = 2.55; SD = 0.54). Nevertheless, very few nurse leaders assessed nurses' knowledge of professional codes (Mean = 2.01; SD = 0.67) or healthcare values and principles (Mean = 1.98; SD = 0.64). Most of the

participating nurse leaders reported carrying out an assessment of ethical behavior during the interview (Mean = 2.68; SD = 0.51) and using ethical competence as a selection criterion (Mean = 2.65; SD = 0.50), but only a few nurse leaders reported using case examples when assessing ethical behavior (Mean = 1.73; SD = 0.72). Reflection about values and principles was mainly performed by going through organizational values and principles during the work interview (Mean = 2.16; SD =0.72) and work orientation (Mean = 2.74; SD = 0.51) (see detailed statistics in the Appendix 14). Almost half of the participating nurse leaders reported discussing ethical issues with other nurse leaders (43%) and doctors (17%) on a weekly basis. None of the background factors were associated with nurse leaders' support for nurses' ethical competence during recruitment.

The results show that nurse leaders' support for nurses' ethical behavior differed at both the component and item levels. At the item level, the response of "often" ranged from 42 – 95%, the response of "rarely" ranged from 5% to 56% and the response of "never" ranged from 1% to 5% (Table 4, article II). Correspondingly, the item mean score (measured on a five-point Likert scale) ranged from 1.73 to 2.92 (Appendix 14). In this way, the participating nurse leaders reported that they supported nurses' ethical competence less often during recruitment than during performance reviews (Article II).

Nurse leaders specified two main ways through which they evaluate whether nurses acted according to values and principles during performance reviews. They ensured whether nurses acted according to ethical values and principles (mean =2.90; SD = 0.32) and acted in line with organizational values and principles (mean =2.92; SD = 0.29). A high proportion of nurse leaders (80%) provided support for acting according to regulations and laws (Mean = 2.80; SD = 0.39), although only half of the participating nurses reported providing feedback on this aspect (Mean =2.46; SD = 0.52). Furthermore, a majority of nurse leaders reported that they often evaluate behavior in an ethical conflict (item means between 2.70 – 2.82), collegiality (item means between 2.90 – 2.96), compliance with ethical guidelines (item means between 2.82 – 2.89) and cooperation with other professional groups (item means between 2.79 – 2.90) during performance reviews. However, almost 50% of the nurse leaders reported that they rarely assess a nurse's need for ethics education (item means between 2.37 – 2.57).

From the single background variables, two showed a statistically significant relationship to support of nurses' ethical competence at the item level (Table 5, Paper II). Nurse leader's educational level and the number of ethical issues that nurse leaders had dealt with were significantly related the extent to which they supported ethical competence during performance reviews. Nurse leaders with a Master's

degree (Mean 2.90, SD 0.21, p = 0.048) in health sciences ensured ethical cooperation with other professional groups more often than nurse leaders with a degree in nursing (Mean 2.80, SD 0.30). Additionally, nurse leaders who had dealt with many ethical issues during their recent education were more likely to ensure that nurses act according to the laws and regulations, act according to professional values, and participate in ethical collaboration with other professional groups. These nurse leaders also assessed nurses' needs for ethics education more often than nurse leaders who had dealt with few ethical issues (see detailed statistics Paper II).

The results from phase II show that nurse leaders' organizational support (OSEC) was at average level (PAP = 51%, table 3, III). The encouragement of ethical activity (Appendix 15) was dominated by requiring nurses to act in accordance with the laws and regulations (Mean = 4,84; SD 0,46) and common values and principles (Mean = 4.45; SD = 0.72). According to the nurse leaders, informing nurses about ethical issues was generally realized by notifying staff about any changes in the law or regulations (Mean = 4.42; SD = 0.79). Correspondingly, conversational support at the unit level was realized through discussion about common values and principles (Mean = 3.96; SD = 0.76). At the sum variable level, the lowest perception of support was obtained for dealing with ethical issues during orientation (PAP = 43.85%, table 3, Paper III). At the item level, the lowest perceptions of OSEC among nurse leaders were identified for discussions during work orientation on participation in ethics education (Mean = 2.69; SD = 0.88), familiarization with how to handle ethical problems during orientation (Mean = 2.73; SD = 0.91), and discussion about what topics should be included in ethics education (Mean =2.76; SD = 0.96).

Nurse leaders had better perceptions of organizational support than nurses. In matched data (nurses, n = 166; nurse leaders, n = 166), nurses' and nurse leaders' perceptions of the provided organizational support differed significantly over all sum variable levels (Table 4, Paper III). Correspondingly, nurse leaders' responses to open-ended questions about organizational support (Appendix 12) revealed that conversational support at the unit level consisted of discussing ethical problems (NL17) and giving feedback on ethical issues during unit meetings (NL14, NL44). Nurse leaders also stated that nurses have the opportunity to participate in ethics committees (NL14, NL58). Supervision sessions (NL20) and consultation meetings (NL14) were mentioned as good forums for handling difficult ethical situations. Laws and regulations (NL22) were dealt during orientation and one nurse leader reported that nurses were able to act as a responsible nurse for ethical issues (NL31)

Just over 60% of nurse leaders ranked their individual support of nurses' ethical competence positively (PAP = 61.5%; table 3, III). Nurse leaders reported (Appendix 16) that compliance with laws and regulations was mainly supported by giving feedback on whether a nurse's actions comply with laws and regulations (Mean = 4.10, SD = 0.62). Likewise, compliance with ethical values and principles was most often supported by the feedback nurses received from their nurse leaders (Mean = 3.91; SD = 0.69). Respectively, nurse leaders' disagreed more often that they support nurses' ethics education (Mean = 3.57; SD = 0.86) or nurses' participation in multidisciplinary discussion of ethical issues (Mean = 3.44; SD = 0.87). At the item level, nurse leaders ranked support during performance reviews about participation in ethics education (Mean 3.01; SD 0.87), feedback on the need for ethics education (Mean 3.04; SD = 0.87) and feedback on participation in multidisciplinary ethics discussions (Mean = 3.09; SD = 0.89) the lowest. In the open-ended questions, nurse leaders reported (Appendix 13) providing individual support to help nurses deal with ethical problems. Furthermore, nurse leaders reported that they dealt ethical problems by discussing with nurses (NL20, NL23, NL34), creating an open climate and acting as a role model (NL28), as well as providing written material and time for reflective discussion (NL34).

5.2   Factors supported by ethical competence

This section provides a brief description of nurses' perceptions of their ethical safety and work satisfaction (Paper IV), including results from the open-ended questions.

5.2.1   *Nurses' perceptions of their ethical safety*

Nurses estimated their level of ethical safety as average (PAP = 69%, table 2, Paper IV). They reported high levels of general ethical safety (PAP = 77%) and ethical autonomy (PAP = 81%), but ranked ethical confidence (PAP = 71%) as moderate and ethical respect (PAP = 51%) substantially lower. At the item level (Appendix 17), over 40% of the nurses did not rank nurses' ethical competence (Mean = 3.6; SD = 0.96), participation in solving ethical problems (Mean = 3.3; SD =0.97) and views on ethical problems (mean = 3.4; SD = 0.97) highly when considering the organizational perspective. However, most nurses reported being capable of openly raising ethical problems (Mean = 4.0; SD = 0.85), expressing their own views concerning ethical problems (Mean = 4.0; SD = 0.86), and participating in discussions on values and principles (Mean 4.0; SD = 0.85). Furthermore, more than half agreed that nurse leaders (Mean = 3.9; SD = 0.81), doctors (mean = 3.8;

SD = 0.78) and other professional groups (Mean = 3.7; SD = 0.85) had confidence in nurses' ethical decision-making.

In the open-ended questions, some nurses reported that their general ethical safety was fulfilled by the good spirit of their work place, a high level of knowledge and working together with the same people for a long time (RN2). In contrast, a few nurses stated that their general ethical safety was jeopardized by the lack of nurses and/or education, turnover of doctors (RN16), as well as rush and work load (RN36, RN42, RN64). Perceptions of ethical autonomy and respect varied. Some nurse leaders felt that nurses were valued (RN13, RN30) and nurses can openly discuss their own ethical reasoning (RN50, RN80, RN89).

5.2.2 *Nurses' perceptions of their work satisfaction*

Nurses reported average work satisfaction (PAP= 64,4%, table 3, IV). As Appendix 17 shows, satisfaction with work duties (Mean = 3.9; SD = 0.89) and congeniality at current workplace (Mean = 4,0; SD = 0,93) were ranked highly. However, other aspects of work satisfaction received average scores; namely, satisfaction with workload (Mean =3,2; SD = 1,13), satisfaction with the working environment (Mean = 3,4; SD = 1,08), factors supporting work satisfaction (Mean = 3.5; SD = 1.03), satisfaction with the emotional demands (Mean = 3,6; SD = 1,04) and satisfaction with the physical demands (Mean = 3.8; SD = 1.00). These results were supported by nurses' responses to the open-ended questions. A number of nurses felt that high workload undermines job satisfaction (RN25, RN30, RN36, RN52, RN64). There were also a few negative comments about physical requirements, such as "working under extreme physical circumstances" (RN69) and fatigue (RN32, RN60). Taking care of doctors' duties (RN30, RN130) was another reason why nurses reporting being dissatisfied with their work.

5.3 Relationships between organizational and individual support and nurses' ethical competence, ethical safety and work satisfaction

This section describes results of relationships between organizational (OSEC) and individual support (ISEC) nurses' ethical competence, ethical safety and work satisfaction will be reported (See also Paper IV). A notable result from phase II was that there was no statistically significant relationship between the background factors and nurses' ethical competence, ethical safety, or work satisfaction (Paper IV).

There were statistically significant positive correlations between OSEC, ISEC, nurses' ethical competence, ethical safety and work satisfaction (see also Paper IV,

Table 3). According to the calculated correlations (Table 16), the relationship between organizational support and ethical competence was found to be moderate yet statistically significant ($r = .346$, $p < 0.001$). In addition, there was a weak and positive, but statistically significant, correlation between individual support and ethical competence ($r = .268$, $p < 0.001$) (Conneely & Boehnke 2007). However, relationship between ethical competence and work satisfaction ($r = .178$, $p = 0.001$) as well as relationship between ethical competence and ethical safety ($r = .385$, $p = 0.001$) were statistically significant. Furthermore, OSEC was a significant predictor of nurses' ethical competence ($r = .346$, $p < 0.001$), ethical safety ($r = .625$, $p < 0.001$) and work satisfaction ($r = .416$, $p < 0.001$).

Table 16 Means, Standard Deviations, and Intercorrelations between OSEC, ISEC, ECO, ESA and WSA.

| Variable | M± SD | r (p) | | | | |
		WSA	ECO	ESA	ISEC	OSEC
WSA	3.65 +0.75	1.000(<0.001)				
ECO	3.82 + 0.50	0.178(=0.001)	1.000(<0.001)			
ESA	3.81 + 0.64	.502(<0.001)	0.385(<0.001)	1.000(<0.001)		
ISEC	3.03 +0.88	0.351(<0.001)	0.268(<0.001)	0.535(<0.001)	1.000(<0.001)	
OSEC	3.14 +0.71	0.416(<0.001)	0.346(<0.001)	0.625(<0.001)	0.783(<0.001)	1.000(<0.001)

*r (p) obtained by Pearson's correlation analysis.
WSA = work satisfaction; ECO = nurses' ethical competence; ESA = ethical safety; ISEC = individual support for nurses' competence; OSEC = organizational support for nurses' competence

Path analysis (Figure 8) of the proposed path model revealed a statistical relationship between OSEC and ethical competence, as well as a connection between ethical competence and both ethical safety and work satisfaction. For ethical competence, one path was statistically significant ($p < 0.05$) indicating that organizational support had direct, and positive relationship with ethical competence. The two paths to ethical safety and work satisfaction, respectively, were statistical significant ($p < .05$), indicating that ethical competence had direct and positive relationship with ethical safety and work satisfaction. There was also a significant statistical correlation between work satisfaction and ethical safety ($r = .719$, $p = .002$).
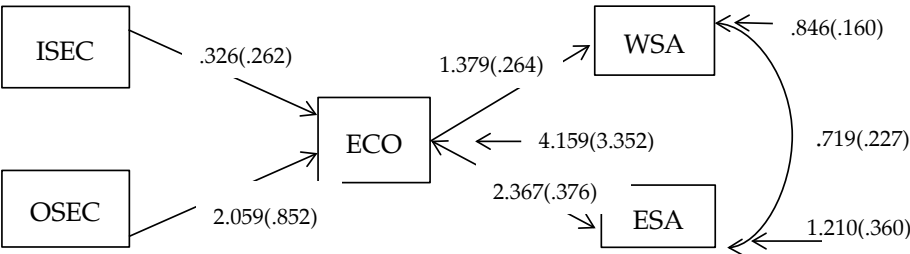
OSEC = organizational support for nurses' ethical competence; ISEC = individual support for nurses' ethical competence; ECO = nurses' ethical competence; WSA = work satisfaction; ESA = ethical safety

Figure 8 Path coefficients of model testing

Path coefficients for all of the theoretical propositions except the relationship between individual support and ethical competence were statistically significant (p <.05) (Table 17). The chi-square to degrees of freedom ratio was 2.67 (p = 0.05), which is considerably less than the recommended value of 3.0 for appropriate fit. Additionally, the minimum fit function chi-square value ($x2$=8.018, p = 0.05) supported model adequacy and the comparative fix index (CFI = 0.98), which reflects the amount of variance and covariance predicted by the model, was greater than the preferred 0.90 (Table 18).

Table 17 Path Coefficients for Path Model

		Estimator	SE	Est./S.E.	P-Value
The relationship between Organizational support and Ethical competence					
Organizational support	Ethical competence	2.059	0.852	2.418	0.016
The relationship between Individual support and Ethical competence					
Individual support	Ethical competence	0.326	0.262	1.242	0.214
The relationship between Work satisfaction and Ethical competence					
Work satisfaction	Ethical competence	1.379	0.264	5.220	0.000
The relationship between Ethical competence and Ethical safety					
Ethical safety	Ethical competence	2.367	0.376	6.292	0.000
The relationship between Ethical safety and Work satisfaction					
Ethical safety	Work satisfaction	0.719	0.227	3.160	0.002

SE = standard error of path coefficient

Table 18 Goodness-of-Fit Indices for the Path Model

x^2/p	df	x2/df	CFI/TIL	RMSEA	SRMR
8.018/.05	3	2,67	0.98/0.94	0.075	0.031

x^2 = chi-square, x^2/df = ratio of chi-square to degrees of freedom, CFI = comparative fit index, TIL = Tucker-Lewis Index, RMSEA = root mean square error of approximation; SRMR = Standardized Root Mean Square Residual

5.4   Summary of the main results

Table 6 summarizes the results from the studies underlying this thesis (Papers I–IV, summary). Based on literature reviews organizational and individual support for nurses ethical competence was operationalized (Paper I) and tested (Paper II, III). Nurse leaders reported supporting nurses' ethical competence more often during performance reviews than during recruitment (Paper II). Nurses' self-assessments revealed low levels of organizational and individual support for their ethical competence (Paper III) and moderate levels of ethical safety and work satisfaction (Paper IV). Unlike the nurses, nurse leaders perceived moderate levels of organi-

zational and individual support for nurses' ethical competence. Positive correlations were found between OSEC and ISEC, ethical competence, safety and work satisfaction (Paper IV).

A hypothesized model of how nurse leaders' organizational and individual support influences nurses' ethical competence, ethical safety and work satisfaction was also tested (Figure 6). Path analysis supported hypothesis 1, i.e. organizational support is directly and positively correlated with nurses' ethical competence. The hypothesis 2 was also valid, as individual support was weakly correlated with nurses' ethical competence. Furthermore, the results supported hypotheses 3 and 4. In this way, nurses' ethical competence positively correlated with their ethical safety and work satisfaction. Both the CFI and RMSEA values suggested that the final model had a reasonably good fit to the underlying data. The path analysis revealed the relationship between nurse leaders' organizational and individual support and ethical competence, which, in turn, increased ethical safety and work satisfaction.

Table 19 Summary of the main results

Phases	Articles	Main results
Phase I	Literature reviews and a mixed-method review (Papers I, II, summary)	Ethical competence can be defined as ethical action that requires knowledge of legislation, knowledge of values, principles and codes of ethics, ethical sensitivity and decision-making for meeting and solving ethical problems. The definition of support for nurses' ethical competence can be divided into organizational (four components) and individual support (seven components). Several factors can promote or hinder the support.
	Cross sectional survey study (Paper II)	Nurse leaders supported nurses' ethical competence more often during performance reviews than during recruitment. During recruitment, participating nurse leaders reported supporting nurses' ethical behavior and knowledge to varying degrees. During performance reviews, nurse leaders supported nurses by ensuring that they meet the requirements for collegiality and comply with ethical guidelines according to nursing values and principles (Article II).
Phase II	Cross sectional, correlational survey study (Papers III, IV, summary)	Nurses reported low levels of OSEC whereas nurse leaders reported these levels to be average. ISEC was estimated to be moderate low based on perceptions of both nurses and nurse leaders.
		Nurses estimated their ethical safety and work satisfaction as average.
		Positive statistical relationships were found between OSEC and ethical competence, ISEC and ethical competence, ISEC and ethical safety, OSEC and work satisfaction.
		Path model analysis supported all four proposed hypotheses: Hypothesis 1: The higher the support at the organizational level the higher nurses' ethical competence. Hypothesis 2: The higher the support at the individual level the higher nurses' ethical competence. Hypothesis 3: The higher nurses' ethical competence the higher work satisfaction Hypothesis 4: The higher nurses' ethical competence the higher ethical safety

6 DISCUSSION

6.1 Validity and reliability

The validity and reliability of the presented research was evaluated during both study phases (Heale & Twycross 2015). One major strength of the research underlying this thesis is that systematic methods were used when conducting literature reviews and developing instruments. However, the presented research also includes some inherent limitations. Hence, the results should be interpreted with caution. The strengths and limitations of individual studies are reported in more detail within the publications (Papers I-IV). The validity and reliability of the literature reviews, data analysis, instruments and content analysis of open-ended questions will be discussed in the following chapters.

6.1.1 Validity and reliability of literature reviews

The validity and reliability of the mixed-method systematic literature review (Harden & Thomas 2005) conducted in phase I of the research was critically appraised according to Centre for Reviews and Dissemination guidelines (Centre for Reviews & Dissemination (CRD) 2009). The quality of the reviewed studies was assessed using specific checklists; quantitative studies were evaluated according the STROBE statement (Elm et al.2007) whereas COREQ criteria (Tong et al. 2007) were applied to qualitative studies. The final inclusion or exclusion criteria were agreed upon by a group of researchers (TP, ON, RS and HL-K), while two researchers (ON and TP) confirmed the validity of analyses. Researchers examined the articles independently, and judged them against inclusion and exclusion criteria as well as the research questions. Synthesis was discussed together and summarized under thematic headings using tables (Additional Supporting Information online, Paper I).

Likewise, the reviews that investigated support for nurses' ethical competence nurses' ethical competence, ethical safety, and work satisfaction were conducted using well-defined search terms, several databases, as well as clear inclusion and exclusion criteria. Furthermore, non-empirical articles were excluded (Summary, 2.1). The definition of inclusion criteria served to minimize selection bias. All of the included studies were summarized in separate tables (Wilczynski & Haynes 2004). These reviews were done by one researcher; therefore, data extraction and synthesis were carefully documented to ensure transparency and repeatability

(Wilczynski & Haynes 2004, Pölkki et al 2012). Data extraction enabled the evaluation of study designs, number of participants as well as study quality and heterogeneity (Grant & Booth 2009).

In this study, the search strategy needs to be carefully appraised, if it was adequate and yielded appropriate references (CRD 2009). Use of references from the field of public management or moral theoretical references could have brought new insight and conceptual views for definitions of concepts. Although views from other disciplines and philosophical point of views were not used in the definitions of concepts, the review showed that, for example, ethical competence as a concept is abstract and have many variations and lack of clear consensus (Table 4). In this study, the concepts were defined based on nursing empirical studies and literature reviews using defined inclusion and exclusion criteria. Nursing ethics studies made it possible to take into account nursing evidence and to focus on them. Notably, the definition of the concepts in this study were evaluated from a limited perspective and might requires a deeper understanding of what are the perspectives in philosophical and other viewpoints in health sciences.

6.1.2 Validity and reliability of the instruments

In the research underlying this thesis, instrument validity (i.e. the ability of the instrument to measure the construct it is intended to measure) was determined by examining construct and content validity (Polit & Beck 2006; Von et al. 2007). Content validity was ensured by performing systematic literature reviews, seeking expert opinions and making sure that the study sample only included nurse leaders and nurses. Furthermore, the Content Validity Index (CVI) for individual items was calculated in each expert panel (8-10 experts) during the developmental stage. I-CVI recommendations from Lynn (1986) and Polit & Beck (2006) were used in the two rounds of expert review (minimum I-CVI =1.00 with 3 to 5 experts and minimum I-CVI = 0.78 for 6 to 10 experts).

Reliability (i.e. the ability of an instrument to consistently measure an attribute) was determined by internal consistency (Heale & Twycross 2015). Analyses demonstrated that the tested items belonged together at the sum variable level (Gliem & Gliem 2003); the Cronbach alpha coefficients for the instruments ranged from 0.76 to 0.92. An alpha coefficient of .70 or above is acceptable for new scales (Gliem & Gliem 2003, Polit & Beck 2006). It was also relevant to measure the length of EthiCS, because it has been suggested that alpha coefficient values over 0.90 represent redundancies and indicate that the instrument should be shortened. The reliability of the instruments could have been improved by using a test-retest

design, but this was not possible to implement with the chosen study design. However, sufficient understanding regarding what tests to choose, what statistical tests mean, and what type of evidence is sufficient from a statistical standpoint was gained by consulting a statistician (JK). For future use, however, there is need for further analysis of psychometrics of the instruments.

Futhermore, the key aspects of the conceptual framework lay in the clarity of the concepts, developed as deeper understanding of the relationship between the main concepts (Durham et al. 2015). It should be noted that at the item level organizational and individual support and ethical competence aimed to measure different aspect of these phenomena. For example, OSEC, ISEC and Ethical Competence instruments contain single items focusing on acting according laws and regulations, but their perspective is different allowing the comparison between the aspects. Furthermore, perceptions of the support were measured in two different level – organizational and individual - while in turn ethical competence was measured based on self-assessment. In the development process of instruments, different aspects were confirmed by assessing the clarity of the individual items. According to Gigliotti & Manister (2012), with a clear content of the essential components (see clarity assessment in Appendix 6) of the theoretical rationale and how to address each component, it was possible to operationalize the different aspects of phenomena and after that explore associations and hypothesis between the main concepts of this study. Furthermore, individual scale items were not analyzed, instead summated subscales were used (Gliem & Gliem 2003). In addition to the definition of concepts, items were clearly appraised to evaluate different aspects of the phenomena through evaluation process done by experts (expert panels).

6.1.3   Validity of the data collection and analysis

In phase I, choices regarding aspects of sampling will affect the generalizability of the study findings (Polit & Beck 2010). The analyzed data were gathered from only two of the five hospital districts in Finland. On the other hand, the included hospitals were university central hospitals and respondents were experienced nurse leaders. The sample underlying phase II research comprised nurses and nurse leaders working within specialized and primary healthcare in Finland (THL 2016). A better representative sampling for the statistical generalizability could have achieved if a more purposive approach in sampling was used (Polit & Beck 2010).

In phase II, a statistical power analysis was performed to determine the sufficient number of participants and avoid type II errors, i.e. retention of a false null hypothesis (Hayat 2013). These calculations used 90% power, an effect size of 0.5 and a

significance level of 0.01. Significance level was set to 0.01 so that multiple comparison errors could be avoided (Tully et al, 2009, Gaskin & Happell 2014). The maximum number of background variables included in the presented studies was eight (8), so calculations were performed according to that number. Thus, if the number of observations is sufficient for this number of background variables, it will also be sufficient in studies with less background variables. The number of observations required was calculated using the Chi-square test according to the number of background variables and individual five-point scale options. At a power level of 90%, a sample size of 296 would be sufficient for detecting differences between nurses and nurse leaders. This number of participants was nearly achieved in the case of the nurses, while the amount of participating nurse leaders fell short of this threshold. However, a low response rate was anticipated based on findings from earlier ethics studies (Suhonen et al. 2011).

Data collection was carried out with online (Phase I) and mail surveys (phase II), both of which have limitations in terms of response rates and questionnaire length (Rattray & Jones 2007). It is well established that the risk of type II errors increases with small sample sizes (Hayat 2013). Despite the low response rates observed in the research underlying this thesis, the sample sizes were large enough to carry out proper statistical analyses. The response rates in the presented research, when considered in comparison to what has been reported in other ethics studies, are at an acceptable level. The research underlying this thesis aimed for representativeness so that the findings would be generalizable on both conceptual and statistical levels. For this reason, only participants who fulfilled predetermined criteria were included in the research (Tully et al. 2009).

One limitation of the email survey was a low response rate (Jones et al. 2008). Regarding the postal questionnaires, respondents either respond to the survey immediately upon receiving the query or do not respond at all. Furthermore, a partially filled-out or even completed questionnaire may not be mailed back to the researcher. To make the questionnaire easier to fill out, the instrument mostly included closed questions with a choice of fixed answers (Polit and Beck, 2006, Rattray & Jones 2007). Another limitation of the presented research is that in phase II nurses were asked to deliver additional questionnaires, initially attached to their own, to their immediate nurse leader at the unit level by mail or internal post. However, the researcher has no information on which nurses, or what proportion of them, mailed the questionnaire to their nurse leaders; as a result, the nurse leaders' response rate is only estimation. Nevertheless, the data collection approach enabled analyses of matched data from 166 nurses and their nurse leaders, which was sufficient for determining statistical differences between nurses' and nurse leaders' perceptions of organizational ethics support. Some reasons for non-participation were announced, for example that respondents did not work as a nurse /

nurse leader anymore or had just started in a new workplace (see article IV). In phase II, it would have been appropriate to send a reminder of the survey to the participants, but this was technically impossible via postal survey and based on anonymity of participants, their e-mail addresses were not released for researcher from the Finnish Nurse Association.

The data analysis strategy was carefully followed during the analysis phase to avoid false positive results. First, the fact that the sample sizes for both nurses and nurse leaders were low was not a detrimental limitation when considering the conceptual and statistical results (Tully et al. 2009). Second, low response rate might leads to the assumption that the results do not reliably reflect the perceptions of the target population. For this reason, the background factors (such as gender, work experience, age, education) were checked based on statistical information about health care and social welfare personnel (THL 2016) and respondents were found to represent the population of nurses and nurse leaders in Finland. The classic statistical generalization is widely-acknowledged as a quality standard in quantitative research (Polit & Beck 2006). The strategy for achieving a representative sample in this study was to use random methods of sampling, which gave every member of the population an equal chance to be included in the study with a determinable probability of selection.

The nonresponse error needs to be considered, if particular nurse /nurse leaders were systematically not represented in the sample because they are alike in their tendency not to respond. This might lead to the presumption that lower response rate equate to lower study validity. In this study it was found that the sample represented the target population and therefore results can be considered reliable and indicative. In particular, few recent studies have demonstrated that there is not a direct correlation between response rate and validity (Holbrook et al. 2007), however this is only one indicator for potentially greater risk of low validity. Therefore, details about participants and reasons for non-participation and ideas to improve participation were reported in this study.

Furthermore, the analyses were conducted by an independent statistician, after which the findings were evaluated by the researcher (PhD candidate), supervisors (H L-K and RS) and statistician (JK) to provide different professional viewpoints (Altman 1980, Tully et al. 2009). To ensure reliable data analysis, multivariate statistics were used to avoid false positive results and a specific threshold for statistical significance was set (Tully et al. 2009). In addition, in multivariate statistical analyses, recognized methods, such as the Sidak adjustment, were used to correct for multiple comparisons (Tully et al. 2009). Furthermore, path analysis was chosen as analysis method to analyze how these variables relate to each other and to provide direction concerning the relations among study variables (Gigliotti &

Manister 2012, Suhr 2018), not just the correlation. In statistical analysis, a model can be referred as a statistical statement about the relations among variables (Suhr 2018).

The validity and reliability of the content analysis of open-ended questions was also assessed. In general, open-ended questions at the end of structured question-naires cannot be clearly classified as either qualitative or quantitative data, so there is a lack of consensus on how to analyze and report them (O'Cathain & Thomas 2004). The purpose of the open-ended question in the presented research was to enable respondents to provide more details than the structured questions afforded. A directed approach to content analysis extended conceptual theoretical frame-work and provided factors that are related to variables of interest (Hsieh & Shan-non 2005). One strength of the open-ended question used in the presented EthiCS instrument is that it did not employ a purely general open-ended question (i.e. "Any other comments?"), but was formulated to guide respondents to think about organ-izational and individual support, ethical competence, ethical safety and work sat-isfaction. The instructions offered examples of the details that participants could comment on (O'Cathain & Thomas 2004). In the content analysis, the most suitable meaningful unit was selected and illustrated in a table. Representative quotations from the transcribed text were shown in the published research to gain credibility. The audit process was performed by only one researcher, and this could cause un-wanted biased (cf. Graneheim & Lundman 2004, Hsieh & Shannon 2005). Fur-thermore, it is important to consider that, nurses' and nurse leaders' selfreported responses can include a certain degree of social desirability response bias that can affect in turn the validity of a questionnaire (Van de Mortel 2008). However, the analyses showed that their open ended comments supported the theoretical frame-work and operational definitions of organizational and individual support. Further-more, the possible bias in self reporting data was ensured using matched data and analysis.

6.2   Discussion of the results

The research underlying this thesis is characterized by four main findings. First, organizational and individual support for nurses' ethical competence was opera-tionally defined. In addition, ethical competence was defined based on a theoretical model presented by Cooper and Menzel (2013) and De Schrijver & Maesschalck (2013) along with various clusters of knowledge, skills and abilities based on of ethical decision-making model presented by Rest (1986) Furthermore, a primary definition of ethical safety was provided based on previously published literature. All of these definitions increased the understanding of these concepts in nursing

and formed the structural framework for subsequent research (Gigliotti & Manister 2012). Notably, ethical safety as a new concept should be taken into careful consideration from the point of view of terminology and content. Safety as a concept is usually connected to the perceptions of safety, safety of operations or circumstances (cf. aviation safety, occupational safety and patient safety in Kines et al. 2011, Alingh et al. 2018, Desmedt et al. 2018, Tremblay & Badri 2018). In this study, however, the ethical safety aspect is more of the ethical safety experienced by the nurses (cf. experience of patient safety). The resulting sample in the review of ethical safety consisted of 20 empirical nursing studies, seven theoretical articles and five reviews, and can be considered as adequate review in the field of nursing. In the future the concept of nurses' ethical safety review need to broaden in other perspectives in different fields, like safety as operations or circumstances.

Second, the EthiCS instrument was developed, with initial psychometric evaluation confirming validity for measuring organizational and individual support for nurses' ethical competence. This instrument has promising qualities for international studies; hence, it was developed based on international nursing studies so that it could provide a global view of the support for nurses' ethical competence.

Third, the presented research provided an overview of organizational and individual support for nurses' ethical competence in Finland. The results suggest that both organizational and individual support within Finnish healthcare need to be strengthened. Nurse leaders should consider how organizational structures can either support or undermine nurses' ethical competence. Support at the individual level was predominantly provided in a conformist way, i.e. it is guided by conventional workplace rules, law and regulations rather than using ethical reflection. Fourth, important indicative connections between OSEC and ISEC, nurses' ethical competence, ethical safety and work satisfaction were found. The results presented in this thesis could be relevant on an international level since the instruments are based on international literature and research results and can be applied for generic use. Furthermore, the research underlying this thesis provided new insight into leadership practice within healthcare (III, IV), like WHO have emphasized the importance of ethical action in accordance with healthcare ethics and values (WHO 2006). These practical implications for leadership are discussed in next chapters.

According to the research presented in this thesis, organizational support for nurses' ethical competence (OSEC) is currently not satisfactory. This is consistent with other studies, which have reported moderate perceived levels of organizational support (Robaee et al. 2018). The results clearly demonstrate that ethical behavior was mostly encouraged by a normative approach that is, ensuring that nurses comply with law and regulations. However, this approach alone is not enough, as laws and rules are generally considered to uphold the fundamental minimum standard

for practice (Iltanen et al. 2012). Nevertheless, it appears that some nurses have opportunities to develop their ethical practices and take responsibility for ethical issues. In this study it was found that nurse leaders supported nurses during performance appraisals, but not at satisfactory level. If the organizational support is higher, nurses will feel more respected. Earlier studies confirm this result in a general level; for example, Dodd et al. (2004) found that nurses are more likely to be ethically active if their involvement is respected and valued.

One important result related to organizational support was that nurses perceive low levels of information on ethical issues and conversational support at the unit level. This highlights a flaw in Finnish nurse leaders' ability to inform employees about ethical issues and create official forums for ethics discussions. Similar results have previously been published; notably, Höglund et al. (2010) found that nurses lack forums for ethical discussions although they felt a need for such support. In the presented research, only a few nurses reported being provided information on ethical issues via emails and intranet. Correspondingly, some nurses stated that formal discussions and unit meetings are one forum through which ethical issues can be discussed. These are all practical examples that nurse leaders should consider and implement systematically. Ethical support through interventional strategies (i.e. ethics education and interdisciplinary ethics support systems) may help mitigate the ethical problems faced by nurses (Ulrich et al. 2003).

Notably, the research underlying this thesis showed that nurse leaders have a direct and active role in supporting nurses' ethical competence during recruitment and performance appraisals. The findings suggest that nurse leaders ensured nurses' ethical competence at some level during different stages of recruitment (e.g. selection criteria, work interview and work orientation). It was confirmed that nurse leaders often assessed ethical competence during a work interview, although they did not use an ethical case example quite as often. This may be because using external measures, such as education, knowledge and skill requirements, to assure competence is more common (Ludwick 1999) Another explanation for why nurse leaders do not systematically use ethical competence as a selection criterion might be that organizations do not have any existing policies, templates or forms for doing so. If nurse leaders systematically used the same case example and as well as ethical competence as one of the selection criteria for all candidates, then all applicants would be subjected to the same ethical competence criteria.

Although few nurses reported discussing ethical issues during orientation, nurse leaders supported the ethical competence of nurses during work orientation more often than during the earlier stages of the recruitment process. It can be argued that an organization's success heavily relies on the recruitment of nurses who act ethically (Hader 2005) and, in this way, nurse leaders should assess every applicant's

ethical capacity at all stages of the recruitment process. Naturally, this is easier to implement in practice during orientation than during recruitment. Turner (2003) has stated that orientation is the first opportunity for ethics education and to raise ethical awareness among nurses. The research presented in this thesis neglected one aspect, namely, how organizational values and principles are described in work advertisements. A clear description of the principles could help promote the organization's patient care values among applicants (Kramer et al. 2007). However, this type of ethically-oriented approach during the recruitment process requires ethical awareness among nurse leaders.

At the organizational level, nurses felt that their participation in ethical decision-making was not adequately supported. This causes some concern, especially when considered together with the finding that nurses estimated their competence in ethical decision-making as average. In fact, it is a nurse leader's responsibility to recognize these organizational barriers, provide the appropriate support in ethical decision-making as well as help nurses identify and analyze ethical problems. As found in earlier studies (Rodney et al., 2002; Goethals et al. 2010), hierarchical dynamics within the medical profession, a stressful work environment, insufficient time and resources, and workload pressure hinder decision-making. All of these elements were mentioned by the nurses participating in the presented research. However, conversational support at the unit level was estimated as average. Nurses have earlier reported that it is very important to share their ethical problems with other nurses (Hartrick Doane et al. 2009, Goethals et al. 2010). The findings indicate that support from other nurses is essential to nurses' ethical competence and their patient advocacy skills (cf. McGrath & Phillips 2009).

The discrepancy between nurses' and nurse leaders' perceptions of organizational support suggests that the ways in which nurse leaders recognize and articulate their ability to provide ethical support should be carefully evaluated. Another Finnish study (Salmela et al. 2017) argues that both nurse leaders and nurses should participate in the creation of ethical multi-professional teamwork. From the human resource management perspective, ethical competence should also be supported during the recruitment and performance reviews as well as through daily leadership (cf. Honkavuo & Lindström 2014, Salmela et al. 2017).

Findings suggest that nurse leaders may have a hard time providing individual support for nurses' ethical competence. According to the presented research, nurse leaders agreed that this type of support was provided at a moderate level whereas nurses perceived low levels of individual support. Silén et al. (2012) had earlier reported that some nurses are able to receive external support from nurse leaders during difficult situations. Another notable result was related to individual feedback. As in previous studies of nursing leadership feedback in Finland (Eneh et al.

2012), the presented research found nurses to be dissatisfied with the feedback they received from their nurse leaders. Only half of the nurses reported receiving feedback on how they had dealt with ethical problems and/or treated patients according to codes of ethics. In practice, nurse leaders should create processes to monitor nurses' ethical actions and offer feedback on their ethical performances (cf. Browne 2009).

The findings regarding individual support found that support for ethics education was ranked the lowest. As documented by Grady et al. (2008), continuous education gave nurses confidence in their moral judgments and encouraged them to use ethics resources. Furthermore, in an recent Norwegian study, nurses expressed a need for systematic ethics education and time for ethics discussion (Bollig et al. 2015). Other research has identified a significantly positive correlation between continuous ethics education and nurses' confidence and ethical action (Deshpande et al. 2006, Dehghani et al. 2015), which suggests that it is critical to include ethics education in orientation (Grady et al. 2008). Furthermore, the presented research suggests that nurse leaders' own ethics education is related to their assessment of a nurse's ethical competence. In this way, nurse leaders with a Master's degree tend to support ethical competence more often than nurse leaders with a degree in nursing. Nurse leaders reported pursuing ongoing education in ethics and assessing nurses' needs for such education. The presented research corroborates another Finnish study (Numminen et al. 2015) in suggesting that continuous ethics education and discussions should be developed not only for managers, but also nurses and multi-professional teams.

Finnish nurses rated their ethical safety skills as moderate, but felt that they had high ethical autonomy because other healthcare professionals (especially nurse leaders) had confidence in their ethical competence. This has also been reported in earlier studies; for example, other researchers have found that a nurse's feeling of being supported within a safe, ethical environment in which their clinical reasoning and ethical decision-making is valued translates to decreased moral distress and increased job satisfaction (Parker et al. 2013). However, full autonomy is difficult to achieve because of medical and organizational procedures (Ulrich et al. 2003). The prevailing argument is that nurse leaders can create ethics support activities that recognize nurses' professional autonomy and help them gain respect within the hospital hierarchy (cf. Charles 2017). Parker et al. (2013) suggested several strategies that may facilitate the creation of an ethical work environment in which nurses feel safe discussing ethical problems. Therefore, clinical ethics support in the form of reflection is vital for personnel working in various healthcare settings (Rasoal et al 2017a and 2017b).

Path model analysis provided indicative support for hypotheses one and two. The results of the presented research suggest that the higher the support at the organizational and individual level was the higher nurses' ethical competence, although the relationship between individual support and ethical competence was found to be weak. The findings also supported proposed hypotheses three and four. Nurses' ethical competence was found to be positively and directly related to work satisfaction. Hypothesis 4 was also supported; nurses' ethical competence and ethical safety were positively related to each other. There may be mediating factors through which OSEC and ISEC affect ethical safety and work satisfaction; for this reason, future research should explore whether certain factors other than ethical competence link support to ethical safety and/or work satisfaction (cf. article I). For example, Lu et al. (2012) found that despite high variation in work satisfaction between studies, nurses' work satisfaction is closely related to factors such as working conditions and the organizational environment, stress, and organizational and professional commitment.

The path analysis that was performed in the presented research identified that work satisfaction and ethical safety were related to each other. This finding is concurrent with findings of Nolan et al. (1995), Joseph and Deshpande (1997) and Verplanken (2004). Nolan et al. (1995) found that level of work satisfaction had remained stable and two factors dominated the relationship between satisfaction and morale, namely: the perceived ability to deliver good patient care (i.e. general safety) and good collegiate relationships with coworkers (i.e. ethical respect and confidence). Furthermore, Verplanken (2004) found that values concerning participation, open discussion and trust enhanced work satisfaction. Joseph and Deshpande (1997) presented a similar finding, and suggested that an organization can enhance nurses' work satisfaction by creating an ethical climate. They also concluded that increased autonomy might be linked to higher work satisfaction.

6.3   Suggestions for future research

The findings discussed in this thesis provide the following suggestions for further nursing research.

First, the instruments for measuring OSEC, ISEC, ethical competence and ethical safety need further systematic testing and development. The research underlying this thesis focused on testing these instruments among nurses working in primary and specialized healthcare settings. Several specific studies are needed to determine whether these instruments are applicable to other settings, such as elderly care, pre-hospital medical emergency or intensive care settings. These studies should ensure adequate sample sizes for the generalizability of results. In addition,

further development and testing of the EthicS instrument among nursing students could identify clinical practice educational solutions for supporting the development of students' ethical competence. Moreover, testing these instruments in other types of academic settings, for example, social science, could strengthen the understanding of ethical competence support mechanisms that are common to various fields.

Second, the content of the developed instruments needs to be validated using international data. It would be especially important to consider the length of the EthiCS instrument and number of items in each sum variable. Further testing of criterion and multicultural validity will provide information regarding whether these instruments can provide reliable results in various international settings. This kind of testing could confirm the generalizability of the instrument to diverse settings, as well as provide evidence that is connected to leadership research. The relevance of the content under each concept, along with their relationships, should also be re-evaluated. In this way, the hypothetical model presented in this study requires more support. More specifically, information about how the combination of organizational and individual support affects nurses' ethical competence is needed. The basis for this question lies in the presented finding that organizational support exerts a greater influence on ethical competence than individual support. Furthermore, the relevance of ethical competence in terms of nurses' ethical safety and work satisfaction needs to be studied in terms of how the relationship between ethical safety and work satisfaction influences the hypothesized model. Instruments contained single items focusing on different aspect of phenomena (for example acting according laws and regulations), but their perspective is different allowing the comparison between these aspects. For instance, one component of organizational support like support for ethics education, might have impact on nurses' ethical sensitivity, while other component of individual support might influence on nurses' ethical decision-making.

Third, intervention studies need to include a focus on organizational and individual support for nurses' ethical competence. Future research should focus on multiprofessional team experiences of discussions of ethical problems. Further, in-depth research should concentrate on identifying the strategies that nurse leaders use during ethical conflicts to understand why support activities are not implemented and/or why nurses are dissatisfied with the organizational and individual support for their ethical competence. In addition, interventional studies could clarify nurse leaders' support for nurses' ethical competence in clinical practice and how this affects patients. Research results of relationships between nurses' ethical actions and patient perceptions of nurses' ethical actions could be useful for nursing science knowledge. This knowledge could be integrated into assessments of nurse leaders' support activities and their outcomes in terms of ethical quality of care.

Fourth, this study adds to existing knowledge about organizational and individual support for nurses' ethical competence. Future research covering leadership ethics should develop methods for measuring the ethical competence of nurse leaders and which skills they use to support nurses' ethical competence. Therefore, research should continue to develop evidence-base interventions and strategies for promoting competencies related to the ethical leadership of nurse leaders. Future research on ethical safety could also aim to provide insight into collective ethics leadership strategies that are used in everyday care situations to make patients, families and nurses feel respected and valued. Nurse leaders will continue to have a pronounced role in ensuring that patients receive appropriate care. High-quality modern healthcare that is integrated, team-based, and outcome-oriented will require proactive system modification and the promotion of ethical behavior. As such, components of ethical safety - general ethical safety, ethical autonomy, ethical respect and ethical confidence - could provide avenues for future theoretical and evidence-based research.

6.4   Practical implications

The results presented in this thesis have implications for leadership practices, education and policymaking in the healthcare context.

A supplementary implication for nurse leaders involves shifting towards creating collective ethical competence for the nursing profession at the organizational level. However, this will require nurse leaders to recognize and address barriers for multi-professional cooperation in ethical issues as part of the development of organizational ethical practices. Nurse leaders could adopt a comprehensive approach to supporting nurses' ethical competence, i.e. distributing ethics policy statements, offering opportunities for reflection and arranging both ethics meetings and staff education. Nurse leaders could discuss concerns regarding ethics support procedures with directors of nursing and present their views to the organization's management board; the outcome of both could possibly lead to improvements in multidisciplinary ethics cooperation. The presented research identified a clear need for different kinds of ethics meetings and formal ethics conversations sessions.

Value orientation and support for nurses' ethical competence can be implemented systematically during recruitment process and continued during orientation process. Nurses can benefit from a variety of support activities at the individual level in their daily nursing. Programs aiming to improve ethical competence could focus on developing systematic ethical competence descriptions and implementing ethical competence scales or checklists. These approaches could help nurse leaders

encourage nurses to use the knowledge they gained in ethics training to solve ethical problems. Moreover, nurse leaders could encourage nurses to solve ethical problems in cooperation with other professionals during daily clinical practice. However, in order to be successful, nurses need opportunities for ethics training courses and events that promote multidisciplinary ethics, deliberation and discussion of ethical issues. At the individual level, nurse leaders could assess nurses' needs for ethics education and give them clear feedback on their ethical behavior. Feedback could relate for example to disclosing patients' errors or recognition for doing meticulous work by keeping patient information confidential. This type of action by nurse leaders might relate to nurses' ethical safety. Support for continuing ethics education at the individual level needs organizational support structures. By ensuring that nurses have sufficient ethical knowledge and competence to handle ethical problems, nurse leaders could be in pivotal role to increase nurses' work satisfaction.

Implications for education mostly concern the nurse leader's role within the educational process. For example, nurse leaders could find new ways to collaborate with national universities of applied sciences and departments of nursing science at universities. In this way, they could help develop professional ethics educational solutions that heavily involve cases that are relevant from the clinical perspective. Nevertheless, the focus might also remain on the nurse leader's own ethics education, as a nurse leader's educational level and the number of ethical issues they had dealt with during their recent education were positively associated with supporting nurses' ethical competence.

Implications for policymaking could relate to helping ethical competence gain more attention at the national level. National guidance for the co-ordination of clinical ethics support might strengthen organizational ethical practices within Finnish healthcare. The results also provide preliminary evidence that there might be need for national regulations that cover clinical ethical support, or at least recommendations that all collaborative areas for healthcare and social welfare in Finland have clinical ethics committees that guides organizational and individual support activities. The possibility for this kind of support might provide guidance in difficult situations and policy formation at the organizational level for multidisciplinary examinations of clinical ethical actions.

7   CONCLUSIONS

The research underlying this thesis presented a novel approach for measuring perceptions of nurse leaders' support for nurses' ethical competence. This research adds to the previous evidence by the main finding that nurses' ethical competence can be promoted in many different ways in human resource management, beginning during recruitment and continuing during performance appraisals and daily support activities by nurse leaders. In addition, the presented research provided promising instruments for measuring ethical competence, ethical safety as well as organizational and individual support. Overall, the findings suggest that it is important for nurse leaders to use a variety of support activities at the organizational and individual levels to support nurses' ethical competence. Furthermore, analyses of a proposed theoretical model revealed relationships in theoretical model of organizational and individual support for nurses' ethical competence, which, in turn, supported nurses' ethical safety and work satisfaction.

This study extends the previous evidence by indicating, that the key support activities at the organizational level seem to be creation of ethics policy statements, support for multidisciplinary discussion of ethical issues, ethics education as well as clinical procedures and methods for dealing with ethical problems. Reflection-based support could be an important measure for nurse leaders to guide the processes through which nurses look back on the ethical choices they made in clinical practice.

At the individual level, nurses most valued support methods could be connected to ethical knowledge, education, reflection and actions. This research raised some concerns about how ethical support activities can be systematically implemented through human resource management. A lack of harmonized approaches for organizational and individual support, challenges nurse leaders to provide proper guidance in difficult clinical situations.

Nurse leaders, as moral agents, could create an environment in which nurses feel comfortable and empowered to discuss and reflect ethical practice. Nurse leaders could influence the extent to which nurses are included in ethical decision-making. Ethical respect and confidence are vital to an ethical work environment. By supporting ethical competence and safety, good leadership could also eventually promote patient autonomy and quality of care. To summarize, the promotion of nurses' ethical competence is a multi-faceted concept that requires the provision of diverse organizational and individual support measures by nurse leaders. At the very least, this means fostering work environments in which nurses are part of the multiprofessional teams that address and discuss ethical conflicts.

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