VILMA ŽYDŽIŪNAITĖ

Leadership Styles in Ethical Dilemmas

Reasons, actions and consequences when head nurses make decisions in ethical dilemmas

ACADEMIC DISSERTATION
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UNIVERSITY OF TAMPERE

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Abstract

A head nurse as a leader should be able to make decisions in ethical dilemmas by selecting a leadership style that would work best in the particular situation and context. The purpose of the overall study was to identify the issues and explore experiences of head nurses regarding the application of leadership styles in ethical dilemmas when they make decisions.

The research questions were as follows: How is the ethical dilemma – and its levels – characterised in a health care context? For what reasons do head nurses apply leadership styles when they make decisions in ethical dilemmas? What are consequences of the leadership styles applied by head nurses in ethical dilemmas? What are the leadership styles applied by head nurses in ethical dilemmas?

The study was implemented in three phases during the period 2009 to 2014. In Phase I, the systematic literature review (n=21) was conducted. In Phase II, the qualitative study was implemented with (n=49) head nurses working in major hospitals and primary health care centres. Conventional inductive latent qualitative content analysis was applied to the data. In Phase III, the quantitative study was conducted with (n=278) head nurses working in five major state-funded clinical hospitals in Lithuania.

The outcomes of the systematic literature review (Phase I) revealed that scientific resources give neither information about the application of leadership styles in ethical dilemmas among head nurses nor about the dominant leadership styles among head nurses when they make decisions in ethical dilemmas.

The findings (Phase II) manifested that head nurses make decisions in complex ethical dilemmas in which nursing, nurses' competence and self-confidence, organisational structures, inter-professional cooperation, and leadership are directly involved. The reasons, actions, and consequences when head nurses face ethical dilemmas are oriented towards patients and their relatives; nurses and nursing practice; interprofessional cooperation and teamwork; leadership and

empowerment; quality of care; respect and professional dignity; and learning and competence.

The results (Phase III) showed that different leadership styles could be applied in ethical dilemmas when head nurses make decisions. Application of leadership styles in ethical dilemmas is associated with such background factors as a head nurse's age, education level, work experience in the head nurse position on a ward, and wards' specialisms.

Findings (Phase III) highlighted the strongest relationships between the application of the particular 'coaching', 'charismatic' and 'affiliate' leadership styles, and the underlying reasons: the incidence of ethical dilemmas; the head nurse's age and personal attributes, educational level, participation in teamwork, satisfaction with decision-making, opportunities to develop organisational competence, and the recognition of the head nurse's authority. 'Laissez-faire', 'democratic', 'sustainable', 'authoritative' and 'transformational' styles are those substantially associated with the head nurse's opportunities to develop organisational competence. The consequences of the application of different leadership styles are: authoritative leadership has the most significant influence on a head nurse's competence improvement; sustainable leadership is the most influential in the development of a communication system on the ward; while affiliate and sustainable styles have the strongest influence on the establishment of a teamwork culture on the ward.

Decision-making in ethical dilemmas requires head nurses to manage the situation, and there is no one 'good' leadership style, which could be the 'rule' and the 'best example' in every case. Head nurses need to reflect on their managerial practices and to find meaningful ways or forms to learn from colleagues, patients and their relatives, as well as from health care institution management.

Keywords: Decision-making; Ethical dilemma; Head nurse; Leadership; Lithuania; Nursing Management; Qualitative content analysis; Statistics.

Tiivistelmä

Johtajana toimiessaan osastonhoitajan tulisi pystyä tekemään päätöksiä eettisesti ongelmallisissa tilanteissa valitsemalla sellaisen johtamistyylin, joka parhaiten sopii kyseiseen tilanteeseen ja kontekstiin. Tämän tutkimuksen päätarkoituksena oli tunnistaa osastonhoitajille eettisesti ongelmallisia tilanteita ja kuvata osastonhoitajien kokemuksia, jotka koskevat heidän päätöksenteossa soveltamiaan johtamistyylejä eettisissä ongelmatilanteissa.

Tutkimuskysymykset olivat seuraavat: Miten määritellään eettisesti ongelmallinen tilanne ja sen tasot terveydenhuollon kontekstissa? Millaisia syitä osastonhoitajilla on erilaisten johtamistyylien käyttämiseen kun he tekevät päätöksiä eettisesti ongelmallisissa tilanteissa? Millaisia seurauksia on osastonhoitajan käyttämästä johtamistavasta eettisesti ongelmallisessa tilanteessa? Millaisia johtamistyylejä osastonhoitajat käyttävät eettisesti ongelmallisissa tilanteissa?

Tutkimuksen toteutus oli kolmivaiheinen vuosina 2009–2014. Vaiheena I oli systemaattinen kirjallisuuskatsaus (n=21). Vaiheessa II laadullinen tutkimus kohdennettiin osastonhoitajille (n=49), jotka työskentelivät isoimmissa sairaaloissa ja terveyskeskuksissa. Aineisto analysoitiin induktiivisella sisällönanalyysilla. Vaiheena III oli määrällinen tutkimus, johon osallistui osastonhoitajia (n=278) viidestä isosta julkisen rahoituksen sairaalasta Liettuassa.

Systemaattisen kirjallisuuskatsauksen (Vaihe I) tulokset toivat ilmi, että tieteelliset lähteet eivät käsittele osastonhoitajien johtajuustyylejä eettisissä ongelmissa eivätkä pääasiallista johtajuustyyliä silloin, kun he tekevät päätöksiä eettisesti ongelmallisissa tilanteissa.

Tulosten (Vaihe II) mukaan osastonhoitajat tekevät päätöksiä kompleksisissa eettisesti ongelmallisissa tilanteissa, jotka liittyvät suoraan hoitajien kompetenssiin ja itseluottamukseen, organisaation rakenteisiin, eri ammattilaisten yhteistyöhön ja johtamiseen. Osastonhoitajien eettisesti ongelmallisissa tilanteissa kohtaamat syyt, toiminnat ja seuraukset kohdistuvat potilaisiin ja heidän läheisiinsä, hoitajiin ja hoitotyön käytäntöön, ammattienväliseen yhteistyöhön ja tiimityöskentelyyn, johtamiseen ja työn hallintaan, hoidon laatuun, kunnioitukseen ja ammatilliseen arvokkuuteen sekä oppimiseen ja kompetenssiin.

Tulokset (Vaihe III) osoittivat että osastonhoitajat saattoivat käyttää erilaisia johtamistyylejä eettisesti ongelmallisissa tilanteissa päätöksiä tehdessään. Erilaisten johtamistyylien käyttäminen eettisesti ongelmallisissa tilanteissa oli yhteydessä vastaajien taustamuuttujiin, kuten osastonhoitajan ikään, koulutustasoon, työkokemuksen pituuteen osastonhoitajana ja osaston toimialaan.

Tuloksissa (Vaihe III) korostui vahvin yhteys erityisen johtamistyylin ja syiden välillä, mitkä ovat yhteydessä: valmentava, karismaattinen ja yhdistävä johtamistyyli ja kaikki tutkitut syyt ovat yhteydessä (eettisesti ongelmallisten tilanteiden esiintymistiheys, osastonhoitajan ikä, koulutustaso, osallistuminen tiimityöskentelyyn, tyytyväisyys päätöksenteon jälkeen, mahdollisuus kompetenssien kehittämiseen organisaatiossa, yksilölliset ominaisuudet ja osastonhoitajan auktoriteetin tunnistaminen) lukuun ottamatta etiikan arvostaminen organisaatiossa. Välinpitämätön, demokraattinen, kestävä, autoritäärinen ja transformationaalinen tyyli olivat merkitsevästi yhteydessä osastonhoitajan mahdollisuuteen kehittää kompetenssialueitaan organisaatiossa. Seuraukset johtamistyylin toteuttamisesta olivat seuraavia. Merkittävin osastonhoitajan kompetenssiin yhteydessä oleva tekijä oli autoritäärisen johtamistyylin käyttäminen. Kestävä johtaminen osoittautui vaikuttavimmaksi osaston kommunikaatiojärjestelmän kehittämisessä. Yhdistävä ja kestävä johtaminen vaikuttavat eniten osaston ryhmätyökulttuuriin.

Päätöksenteko eettisesti ongelmallisissa tilanteissa vaatii osastonhoitajalta tilanteen hallintaa. Ei ole olemassa vain yhtä hyvää johtamistyyliä, jota voitaisiin pitää sääntönä tai parhaana esimerkkinä joka tilanteessa. Osastonhoitajien tulee reflektoida omia johtamiskäytänteitään ja löytää tarkoituksenmukaisia keinoja ja muotoja kollegoilta, potilailta ja heidän läheisiltään, kuten myös oppiakseen terveydenhuolto-organisaation ylemmiltä johtajilta.

Asiasanat: Päätöksenteko; Eettisesti ongelmallinen tilanne; Osastonhoitaja; Johtaminen; Liettua; Hoitotyön johtaminen; Laadullinen sisällön analyysi; Statistiikka.

List of tables, figures, and appendices

List of original publications

The dissertation is based on the following publications, which are referred to in the text by their Roman numerals from I to IV.

I Zydziunaite, V., Suominen, T., Åstedt-Kurki, P., Lepaitė, D. 2010. The ethical dilemmas concerning decision-making within health care leadership: systematic literature review. Medicina, 46(9), 595-603.

II Zydziunaite, V., Lepaite, D., Åstedt-Kurki, P., Suominen, T. 2015. Head nurses' decision-making when managing ethical dilemmas. Baltic Journal of Management, 10(2), 166-187.

III Zydziunaite, V., Lepaite, D, Suominen, T. 2013. Leadership styles in ethical dilemas when head nurses make decisions. International Nursing Review, 60(2), 228-235.

IV Zydziunaite, V., Suominen, T. 2014. Reasons and consequences of applied leadership styles in ethical dilemmas when nurse managers make decisions. Contemporary Nurse, 48(2), 150-167.

1 Introduction

Leaders are seen as being best able to represent the values of the group, organisation and/or their followers, and are better at solving their followers' problems and achieving their goals (Lewis, 2000).

The concept of *leadership* carries different connotations and is often viewed as synonymous with other, equally complex concepts such as power, authority, management, administration, and supervision (Sub Lim, 2008). However, despite the focus of different disciplines on the leadership 'the field of leadership studies has not succeeded in articulating a coherent, paradigm-shifting model or approach that both scholars and practitioners can accept and work with' (Jones, 2005, p. 259). Leadership is not the same as management: 'whereas managers are concerned with today, delivery, targets, efficiency, utilisation and authority, focusing on internal organisational issues, on control and on doing things right, leaders are held to be oriented to tomorrow, development, direction, purpose and vision, and to innovation' (Illes & Preece, 2006, p.8). This description shows that leadership depends on the leader and is related to power and influence.

Leadership exists in healthcare facilities where effecting change and achieving high standards of patient care are stipulated in job titles, such as Director of Nursing, Head Nurse or Chief Nurse on the ward or Nurse Manager (Suhonen et al., 2011). What needs emphasising is that a job title on its own does not make a leader. What determines a leader is his/her behaviour (Curtis et al., 2011), which is seen through a nurse's role performance.

The importance of leadership in health care has been emphasised (Carney, 2006; Greenfield, 2007; Sutherland & Dodd, 2008), and nursing leadership is pivotal to this as nurses represent the largest professional activity in health care (Marquis & Huston, 2009; Suhonen et al., 2011). Leadership in nursing is a moral pursuit in the sense that it is based upon standards of behaviour governing what is considered appropriate, by the profession if not by society at large. It is an ethical pursuit in the sense that there are ways of monitoring these standards, all of which contribute

to our notions of appropriate professional conduct (Hylton, 2006). Leadership in nursing is related to clinical consequences (Berwick, 1994), patient safety (Tregunno et al., 2009); commitment to quality (Van Deusen et al., 2007), work environments (Shirey, 2009), job satisfaction (Sellgren et al., 2007), and turnover rates (Gelinas & Bohen, 2000). In the studies, the relationship between patient care quality, improvement in personnel mentality and the effectiveness of leadership among head nurses is conformed (Kleinman, 2004; Force, 2005). This study is based on the Cole (1998) and Fisher (2000) conceptions that leadership is divided into four types, namely instrumental, supportive, participative and achievement-oriented, each of which consists of a certain leadership style.

The head nurse on the ward is in a pivotal leadership position within today's health care organisation and serves to integrate the needs of nursing staff, patients, and the nursing profession itself, with the institutional mission and goals (Curtis et al., 2011). The head nurse's role is seen as one of most complex roles in a healthcare setting (Thrall, 2006). The head nurse is responsible for translating strategic goals and objectives formulated at the operational level into practice; thus, the position of nurse manager requires an ability to interpret general concepts and integrate them into specific clinical and management performance, while simultaneously determining and monitoring outcomes (Chase, 2010). The head nurse's role involves nurturing others and being aware of how people in the team are feeling by being emotionally in tune with staff (Bondas, 2006). The head nurse has the responsibility to ensure that the mission of the organisation is translated into everyday nursing practice, nursing management, and leadership on the ward (Ramey, 2002; Upenieks, 2002). Leadership for head nurses on the ward is about the following: making decisions; delegating appropriately; resolving conflict; and acting with integrity (Frankel, 2008).

A head nurse's ethical responsibilities are not only to patients but also to the nurses working in their institution (Toren & Wagner 2010) and in this context ethical dilemmas may emerge. Ethical dilemmas are experienced as troublesome situations where conflicts could arise. The dilemmas inherent in everyday nursing demonstrate the basic nature of ethical or moral decision-making in nursing leadership (Lindy & Schaefer, 2010). Silen et al. (2008) mention that ethical dilemmas for head nurses are the workplace stressors with high workload and lack of influence. The question is posed of whether head nurses on the wards can make decisions by maintaining patients' and nursing staff rights while fulfilling

managerial obligations to the demands of the organisation at the same time? Such a context creates ethical dilemmas for head nurses and they should empower themselves for leadership in particular situations by managing it through applying the relevant leadership styles.

The ethical dilemma involves a close-run race between one idea of what is right and fitting and another – between the values, beliefs and attitudes which underpin such definitions. Deciding what head nurses should do involves teasing out and weighing up the values upon which such decisions are based (Silen et al., 2008). Decision-making in ethical dilemmas is based upon recognition of the values that underlie the beliefs and attitudes, and determine the moral behaviour of head nurses (Lindy & Schaefer, 2010). Moral rules are of their nature general, and moral decisions are always particular. Though moral rules are intended to apply universally, to human life in general and to all people, decisions can only be responsible if they are a response to the specific needs and demands of a specific situation. Leadership style is only one variable among many that determine the leader's behaviour and attitudes (Steinert et al., 2006). It is important to note that labels of leadership styles contain value connotations that have made it difficult to investigate this issue objectively, especially in respect of decision-making in ethical dilemmas (Cummings et al., 2010).

Most of the researchers in their studies speak about aspects that relate to the emergence of ethical dilemmas regarding head nurse's work such as organisational culture (Raines, 2000; Bahreini et al., 2011), head nurse's responsibility (Kälvermark et al., 2004), head nurse's competence and personal values (Gilliland, 2010), head nurse's communication skills (Toren & Wagner, 2010), pluralism of values at organisational and personal (head nurse's) level and the need to prioritise them (Berlin, 1991; Nasae et al., 2008). Researchers discuss several aspects in ethical dilemmas and in most cases one of the aspects is value (Raines, 2000; Nasae et al., 2008; Silen et al., 2008; Lindy & Schaefer, 2010; Bahreini et al., 2011). They investigate the routine practice of taking the decision-making process for granted. Such a research spectrum in literature manifested the limited number of studies about the complexity of the decision-making process in ethical dilemmas with regard to leadership.

There is a lack of literature with the focus on ethical dilemmas regarding decision-making in leadership, defining ethical dilemmas and revealing general

factors concerning the application of leadership styles. Also, the scientific literature does not speak much about the head nurse's leadership in decision-making within ethical dilemmas. This study focuses on leadership styles when head nurses on wards make decisions within ethical dilemmas. In this study there is evident a complex focus integrating leadership and its styles, decision-making by head nurses on the ward, and ethical dilemmas. This shows that ethical dilemmas are the context for decision-making, and leadership styles are instruments applied by head nurses. In any case, leadership, leadership styles, head nurse, decision-making and ethical dilemmas are the core concepts that are related to the research questions of this research. This study could be seen as multidimensional because it is linked to nursing management and leadership, problem-solving and decision-making practices in ethical dilemmas.

2 Literature review

A review of the literature for this summary text was conducted to describe concepts such as 'head nurse', 'ethical dilemma', 'leadership styles' and 'decision-making'. The updated literature was researched from the Cinahl, Medline, PubMed, British Nursing Index, PsycINFO, and EBSCOhost databases, focusing mainly on the period from 1990 to 2014.

In all databases the search was limited to English-language abstracts and full texts. In addition the lists of references of the articles identified were manually searched. The dictionaries, documents as open informational resources from the Internet, were used for clarification of the term 'head nurse'. The texts selected for closer review were chosen on the basis of research questions.

The following keywords were searched, both individually and in various combinations: 'actions*', 'chief nurse', 'consequences*', 'department', 'decision-making*', 'ethical dilemma*', 'ethical issue', 'health care institution', 'health care leadership', 'health care management', 'hospital', 'nurse leader', 'head nurse*', 'leadership*', 'leadership style*', 'nurse manager*', 'nursing management', 'nursing leadership*', 'reasons*'.

Because of the study purposes, the data searches were first limited to the most recent literature and later expanded further to older work without time limits (Lincoln & Holmes, 2011). This literature review is the updated literature review with deeper and wider focus on key concepts that are studied and discussed in this study. It is not the same as systematic literature review, which is presented in Article I. The systematic review (Article I) focuses on description of ethical dilemma and its levels in health care context, and discussed in the section of 'Results'.

2.1 Ethical dilemmas in the head nurse's work

2.1.1 Head nurse's job title and work content

The job title 'head nurse' in an international health care context has certain characteristics – some general, and some specific. The definitions in Table 1 could be summarised in the following characterisation: the job title 'head nurse' means acting as a leader in a health care institution or one of its units, and is oriented to the supervision of administrative and clinical aspects in nursing.

Table 1. Definitions of job title 'head nurse' from open internet-based resources

The title of resource	Definition of 'head nurse'
Merriam Webster vocabulary (2003-2012)	Synonymous: Charge nurse; especially: one with overall responsibility for the supervision of the administrative and clinical aspects of nursing care.
Free Dictionary.com (2014); Vocabulary.com (2014)	The person in charge of nursing in a medical institution is skilled in caring for young children or the sick (usually under the supervision of a physician).
WordNet (2006)	The person in charge of nursing in a medical institution.
Urban Dictionary (1999-2014)	The lead nurse working on a shift.
AudioEnglish.org Dictionary (2014)	A person in charge of nursing in a medical institution (US).
Collins English Dictionary (2014)	The chief nurse in a hospital; matron (US).
Scribd. World's Digital Library (2014)	A head nurse is the one who assumes responsibility for managing the Human and material resources of a nursing unit and takes lead in developing to provide quality patient care and an environment conductive to staff growth and satisfaction (US).
Lexic.us (2000); Mondofacto (2008-2010)	The person in charge of nursing in a medical institution. A nurse administratively responsible for a designated hospital unit on a 24-hour basis; Head Nurse in Charge. Synonyms: charge nurse or unit manager (US).
English Definition Dictionary Reverso (2000)	The position of leadership or command.
Dictionarist (2011)	Chief nurse, woman in charge of nursing in a medical institution.
Pocket Fowler's Modern English. Oxford Reference (2008); A Dictionary of Nursing (2008); Dictionary of Public Health (2007)	The British term, now obsolete, for the head nurse or senior nursing officer in a hospital (UK).
Cambridge Advanced Learner's Dictionary & Thesaurus (2014)	A nurse who is responsible for a particular part of a hospital. He is the male equal to the sister (UK).

The title and position of 'head nurse' in USA and UK health care systems and organisational culture synonymously are called/named as 'matron', 'director of

nursing', 'service director', 'nurse manager', and 'charge nurse' (Glasby, 2003; Lees, 2007, 2012; Fatchett, 2012; Table 2). A head nurse's executive title means a managerial position at a health care organisation/facility, where s/he supervises the quality of care, is responsible for budgeting and acts as a leader-mediator in clinical nursing practice between practical and board levels in a health care system organisation. A head nurse reports to a board of nurses or a CEO at a health care institution. Both analyses (Tables 1 & 2) show that the job title 'head nurse' integrates in her/his work, supervision, leadership and management.

Table 2. Descriptions of job title 'head nurse' synonyms in USA and UK (according to Glasby, 2003; Lees, 2007, 2012; Gneith, 2010; Fatchett, 2012)

Titles of 'head nurse'	Descriptions of 'head nurse' synonymous titles
Matron (USA)	• Senior nurse/sister, who serves as the head of the general staff of the hospital • Provides strong leadership and act as a link between Board level nurses and clinical practice • Supervises nurses' duty performance
Director of Nursing (USA)	• Registered nurse who supervises the care of all the patients at a health care facility • The director of nursing is the senior nursing management position in an organisation and often holds executive titles like 'Chief Nursing Officer', 'Chief Nurse Executive', 'Vice-President of Nursing' (they typically report to the CEO (Chief Executive Officer) or COO (Chief Operating Officer) (corporate title))
Service director (USA)	• This director has oversight of a particular service within the facility or system (surgical services, women's services, emergency services, critical care services, etc.).
Nurse manager	• The nurse with management responsibilities of a nursing unit. • S/he typically reports to a service director and has primary responsibilities for staffing, budgeting, and day-to-day operations of the unit.
Charge nurse (USA and UK)	• The nurse usually assigned for a shift and is responsible for the immediate functioning of the unit. • The charge nurse is responsible for making sure nursing care is delivered safely and that all the patients on the unit are receiving adequate care. • S/he is typically the frontline management in nursing unit. • Some charge nurses are permanent members of the nursing management team and are called shift supervisors. • The traditional term for a female charge nurse is a nursing sister (or just sister), and this term is still commonly used in UK.

In Lithuania, 'head nurse' refers to the formal title of the work position for heads or formal leaders in nursing on wards (Zydziunaite et al., 2013). In Lithuania, head nurses are subordinate to the head physicians on the wards as well as to the head nurse (or vice-director for nursing) of the hospital (Greiciene & Petronyte, 2013). The head nurse, as a formal leader is responsible for the supervision and

management of the administrative and clinical aspects of nursing on the ward (Butenas & Zydziunaite, 2013).

A head nurse's work content as a nurse manager usually includes business, clinical, and personnel functions, and career development, in addition to the staff support function that is the focus here (Lee et al., 2005; Fatchet, 2012). A head nurse's roles, functions, and activities are attached to the job title 'head nurse' because it incorporates the international and national understanding of the title (Nasae et al., 2008).

From the definitions in Table 1 it is evident that a head nurse's responsibility relates to subjects (patients, nursing staff, unit, institution); to processes (allocation of material resources, development of human resources); to quality of nursing and patient care; and to a head nurse's own competence as s/he is characterised as 'skilled in caring'. Several open internet-based resources (Table 1) mention that a head nurse acts under the supervision of a physician, which reflects both on the head nurse's limited autonomy and freedom in decision-making (Gheith, 2010), and on the need for a head nurse's general skills, such as cooperation, collaboration, teamworking, communication, tolerance, and diplomacy, because s/he is like a mediator between the patient and/or the patient's relatives and physician (Jones & Jones, 1979; Bahreini et al., 2011).

The findings of the analysis of international information resources (U.S. Department of Labor, 2013; Director of Nursing: Duties, Requirements and Responsibilities, 2014; Job description: Head nurse, 2014; Job Description & Responsibilities of a Head Nurse, 2014; Manager's Guide: Head Nurse, 2014; Ray, 2014) describe more comprehensively the responsibilities, roles, duties, skills, competencies and general requirements for head nurses' work content. That analysis also reveals that a head nurse should: i) continually develop skills, perform roles and take responsibilities in clinical governance, professional leadership, supervision, caring for patients, inventory management, cooperation, communication, education, administration, team-building, -working and –leading; ii) communicate and care for a good social and professional climate in interactions with patients and their families, other nurses (nursing staff), physicians, hospital managers and other colleagues, through cooperation, collaboration and self-empowerment for leadership; iii) be able to solve problems, prioritise tasks and make decisions autonomously; iv) motivate the self and empower others for

effective work and manage personal and work-related pressures through leading a team; v) experience change management through leading a team; vi) implement good communication both verbal and written as well as management in leading a team; vii) evaluate the quality of care through identifying the needs of patients and nursing staff, and measuring the nurses' performance; viii) resolve conflicts through critical thinking and reflection; ix) maintain values such as dignity, respect, responsibility, understanding, empathy, kindness; x) establish a working climate where nursing staff would be able to grow professionally and personally.

From 1995 to 2003 the Orders of the Ministry of Health Care of the Republic of Lithuania governed the general direction for head nurses on wards regarding functions, competence, duties, rights and responsibilities (Medical Norm MN: 1995). From 2003 the head nurse's duties, responsibilities, functions, requirements for competence, rights and responsibilities are described according to the Law on Nursing Practice and Midwifery of the Republic of Lithuania (14.07.2009, No. XI-343), ratified in 2001 and updated in 2009, and according to the 'Medical Norm of the Republic of Lithuania (MN28: 2011, 08.06.2011, No. V-591) on the Rights, Duties, Competence and Responsibility of the General Practice Nurse'. The requirements for the head nurse's competence, descriptions of her/his functions, duties, and responsibilities are not specified in separate documents and could be only extracted from the legal documents mentioned. In the terminology and definitions parts of these documents there are no mentions of head and chief nurse, nurses manager and/or nurse administrator. Only in some parts of the 'Medical Norm of the Republic of Lithuania on the Rights, Duties, Competence and Responsibility of the General Practice Nurse (GPN)' there are mentioned some components that could be related to the head nurse's work content with the focus on management and administration such as: participation in the implementation of health and safety measures in research and pedagogical activities; giving recommendations on improvement of working conditions in order to assure the quality of nursing services; managing nursing documentation and delivering statistical data; reporting the mistakes of a health carer to the responsible person in the management level of the institution; knowing the peculiarities of health care administration, principles of team-working and team-formation of health care specialists; being able to diagnose the needs of patients from different age groups; assessing the outcomes of nursing services; selecting, managing, accumulating and disseminating information.

The above descriptions show that activities of the head nurse that are focused on management, administration, leadership, supervision, training and education, communication, and hiring, as well as the requirements for the head nurse's work content, are not specified; leadership, and management competence are not mentioned.

2.1.2 Ethical dilemmas in decision-making by a head nurse

Ethical dilemmas in nursing management are moral dilemmas because of a particular kind of conflict between the rightness or wrongness of the actions, and the goodness or badness of the consequences of the actions (Lincoln & Holmes, 2011). An ethical dilemma is a situation that will often involve an apparent conflict between moral imperatives, in which to obey one would result in transgressing another (Table 3). This is also called an ethical paradox, since in moral philosophy, paradox plays a central role in ethics debates (Kidder, 1995; Lee et al., 2005). However, human beings have complex social relationships that cannot be ignored (Gilliland, 2010).

Table 3. Types of ethical dilemmas meet head nurses when they make decisions (according to Kidder, 1995; Lee et al., 2005)

Situation	Description
Issue/problem	Important values are present or may be challenged.
Dilemma	Two alternative courses of action may be taken, both of which fulfil an important duty, and it is not possible to fulfil both obligations. 'Right versus right' decision.
Distress	You know the right course of action but are not authorised or empowered to perform it. Note that ethical distress may present as a later 'complication' of any of the ethical situations. Ethical distress is often identified during the implementation phase of decision-making.
Temptation	Involves a choice between a 'right' and a 'wrong' and in which you may stand to benefit from doing the wrong thing. 'Right versus wrong' situation.
Silence	Ethical values are challenged, but no one is speaking about this challenge to values. This may actually be the course taken by an individual who is experiencing moral distress.

Ethical dilemma is the situation in which there are two conflicting courses of actions that appear to be right: i) doing what is morally right results in a bad outcome; ii) doing what is morally wrong results in a good or better outcome (Berlin, 1991). Kidder (1995) calls this situation 'right versus right'. This author prefers three approaches to resolving ethical dilemmas, when decisions should be made: i) rule-based – follow the rules, duties, obligations, or ethical principles already in place; ii) ends-based – determine the consequences or outcomes of

alternative actions and the good or harm that will result for all of the stakeholders; iii) care-based – resolve dilemmas according to relationships and concern for others.

Ethical dilemmas are often cited in an attempt to refute an ethical system or moral code, as well as the worldview that encompasses or grows from it. These arguments can be refuted in various ways, for example by showing that the claimed ethical dilemma is only apparent and does not really exist, or that situational ethics or situated ethics must apply because the case cannot be removed from context and still be understood (Lincoln & Holmes, 2011).

Head nurses face moral and ethical dilemmas in leadership within the health care institution. They influence the culture of an organisation and are responsible for creating credibility and trust (Bahreini et al., 2011), when they make decisions in ethical dilemmas. Taking a look at what went wrong and why decision-making failed reveals moral and ethical shortcomings. But to truly understand, one must look deeper, into the very hearts and souls of the head nurses' leaders who guide responsibility (Kälvermark et al., 2004) in nursing management. One must look at the moral and ethical stance of the health care institution and the role of the head nurse's leadership in creating a culture of values (Raines, 2000) on a ward.

Head nurses, by making decisions in ethical dilemmas, often experience situations in which their responsibilities unexpectedly come into conflict with their values and they are caught in a conflict between 'personal right' and 'situational or contextual right'. No matter which option they choose, they experience uncertainty (Nasae et al., 2008).

No rules exist on decision-making in an ethical dilemma because it depends upon the context and situation (Kirschner et al., 2001). The decision-making process within an ethical context has four steps (Lee et al., 2005): i) recognise and define the ethical issues (examination and analysis of the case); ii) reflect (reflecting upon and interpreting the information gathered in step one); iii) decide the right thing to do (this step is specifically for the resolution of ethical dilemmas); and iv) implement, evaluate, and re-assess (important in situations of 'right versus wrong' and in situations where there may be organisational or societal barriers to your proposed course of action).

2.2 Leadership styles applied by head nurses in ethical dilemmas

2.2.1. Characteristics of leadership styles and their effects on head nurses' decision-making in ethical dilemmas

There are many identified styles of leadership and its characteristics. These include primitive (autocratic, laissez-faire, bureaucratic), paternalistic (coaching, charismatic), modern (democratic, affiliate, particular), thought (sustainable, authoritative, transformational) (Ozar et al., 2000). But no one author speaks about its application in a context of ethical dilemmas. The following paragraphs present the core characteristics of the concrete leadership styles, which were evaluated in the quantitative research of this study.

'Autocratic' leadership style is demonstrated when a leader makes all decisions without considering input from staff. Mistakes are not tolerated and blame is placed on individuals rather than on faulty processes (Frandsen, 2013; Van de Vliert, 2006). The leader seeks obedience from employees who have to carry out the work as desired by the leader. Decision-making is quick, and less competent subordinates can be easily directed. Communication is usually top-down (Su et al., 2012). The positive side of this style is that it works perfectly in emergencies or chaotic situations where there is little time for discussion (Frandsen, 2013).

'Laissez-faire' leadership is a style in which the leader provides little or no direction or supervision, and prefers to take a hands-off approach. Decisions are not made, changes rarely occur, and quality improvement is typically reactive, not proactive (Frandsen, 2013). In this type of leadership, each worker has her/his own authority and the leader is more or less like an information booth. S/he exercises minimum control and assumes the role of just another member of the group (Marquis & Huston, 2009).

'Bureaucratic' leadership is based upon fixed official duties under a hierarchy of authority, applying a system of rules for management and decision-making. This style of leadership can be an efficient management style in situations that do not require much creativity or innovation from employees. Bureaucratic leadership is top-down in nature, which does not usually permit employee participation in decision-making (Grimsley, 2014). Bureaucratic leaders are usually strongly committed to procedures and processes instead of people, and as a result they may

appear aloof and highly change-averse (Ojokuku et al., 2012). The specific problems associated with using policies to lead are not always obvious until the damage is done (Michael, 2010).

'Coaching' leadership style is described as a one-on-one style, and focuses on developing individuals, showing them how to improve their performance, and helping to connect their goals to the goals of the organisation. Coaching works best with employees who show initiative and want more professional development. But it can backfire if it is perceived as 'micromanaging' an employee, and undermines his or her self-confidence (Murray, 2013). Coaching leadership is not, however, telling someone what to do and how to do it. Occasionally, it involves overseeing what is being done and advising how to do it better (Fielden, 2013). Coaching is focused on skills, performance, development and an executive agenda. Coaching leadership refers to the leader's primary function in helping the staff learn and change (Horner, 2002). Within goal-oriented coaching there are fundamental questions that need to be addressed, such as who is setting the goals, what type of goals are of most value, how the goals can be achieved and how feedback can be incorporated (Vella et al., 2010).

'Charismatic' leadership provides fertile ground for creativity and innovation, and is often highly motivational. Charismatic leadership does not depend on the leader's qualities or the presence of a crisis alone, but rather that it is an interactional concept. Charisma is the result of follower perceptions and reactions, influenced not only by actual leader characteristics and behaviour but also by the context of the situation (Lussier & Achua, 2010). Charismatic leaders have a vision, as well as a personality that motivates followers to execute that vision (Marquis & Huston, 2009). Their leadership is based upon strength of personality. As a result, charismatic leadership usually eliminates other competing, strong personalities (Ojokuku et al., 2012). The result of weeding out the competition is a legion of happy followers, but few future leaders (Michael, 2010). The strong belief in the vision of the charismatic leader is a key factor in distinguishing followers of charismatic leaders from those of other types of leaders (Lussier & Achua, 2010).

'Democratic' leadership encourages open communication and staff participation in decisions. Workers are given responsibility, accountability, and feedback regarding their performance. Relationships are important to this leader (Frandsen, 2013). The leader draws ideas and suggestions from the workers by discussion and

consultations. The workers are encouraged to take part in setting organisation goals and the job of leader is mainly that of moderation. Decision-making takes more time (Gupta & Singh, 1999; Marquis & Huston, 2009).

'Affiliate' leadership emphasises the importance of teamwork, and creates harmony in a group by connecting people to each other. This approach is particularly valuable when trying to heighten team harmony, increase morale, improve communication or repair broken trust in an organisation. By using it alone, this leadership can allow poor performance to go uncorrected, because employees may perceive that mediocrity is tolerated (Murray, 2013). Its exclusive focus on praise can allow poor performance to go uncorrected. Affiliate leaders rarely offer advice, which often leaves employees in a quandary (Goleman, 2002).

'Sustainable' leaders combine best practices of sustainability to maximise their capacity for making an impact beyond their presence or involvement. Sustainable leaders weigh deliberate short-term decisions with long-view planning and carefully reflect on the social justice, environmental, and financial implications (De Vulpian & Dupoux-Couturier, 2008). They recognise the importance of sustaining their energy, reputation, and their relationships in all aspects of their staff – personally, professionally and organisationally (Skarie, 2013).

An 'authoritative' leader states the overall goal, but gives people the freedom to choose their own means of achieving it. This style works well when the activity is adrift. It is less effective when the leader is working with the team of experts who are more experienced than s/he is (Goleman, 2002). It is a very collaborative style, which focuses on emotional needs over work needs (Goleman et al., 2001). When done badly, it avoids emotionally distressing situations such as negative feedback. It is best used for healing rifts and getting through stressful situations (Oliver, 2006).

'Transformational' leadership is based on building relationships and motivating staff members through a shared vision and mission, and is most frequently identified with creating an environment conducive to better outcomes for nurses and patients (Bass, 1999). This form of leadership can motivate the leader and followers and create synergistic environments that can manage change creatively (Marquis & Huston, 2009). Transformational leaders have the confidence to act in a way that inspires others, gaining staff respect and loyalty from letting the staff know they are important. Such leaders are masters at helping people do things they

were not sure they could do by giving encouragement and praise (Frandsen, 2013). Managers exercising a transformational leadership style focus on the development of value system of employees, their motivational level and moralities with the development of their skills (Ismail et al., 2009).

There is no one and only correct leadership style; the same result can be achieved in many ways. A manager who has the ability to reflect on his/her own behaviour is better able to regulate and estimate his/her leadership style with different employees in different situations (Vesterinen et al., 2012) by seeing reasons influencing leadership.

2.2.2 Reasons influencing leadership in ethical dilemmas, when head nurses make decisions

Reasons to apply leadership styles when head nurses make decisions within ethical dilemmas are personal/individual, organisational/institutional and managerial.

Personal/individual reasons mean factors that have an impact on leadership within ethical dilemmas (Funder, 2012): the appropriateness of the leader's style to the situation will have a major impact on the behaviour of the group; task clarity, urgency and subordinate empathy will affect performance and motivation; leader qualifications and knowledge will build group confidence and loyalty.

Such reasons as demonstrating personal qualities, working with others, managing services, improving services, and setting direction, integrate personal and institutional levels when head nurses need to make decisions in ethical dilemmas (Marquis & Huston, 2009). Head nurses choose the components for the situation at hand and the context, and integrate them in order to make a decision in an ethical dilemma in the way, which would satisfy professionals, patients and the health care institution. This could be only the intention or the only theoretical possibility, because every ethical dilemma is unique, authentic, patient-focused and requires from head nurses as objective decision-making as is possible (Severinsson & Hummelvoll, 2001). There is very little possibility to speak about the only one 'right' leadership style, because of the variety of reasons in a concrete ethical dilemma within the particular context (Whitehead et al., 2010).

The head nurse's skills are her/his personal reasons (Funder, 2012) for making

decisions in ethical dilemmas. Essential head nurse's managerial and leadership skills that affect decision-making within ethical dilemmas are, according to Huston (2008), expert decision-making and the ability to create an organisational culture which permeate quality of health care, patient and nursing staff safety, collaboration and team building, the ability to balance authenticity with performance expectations, and being able to envision and proactively adapt to contexts and situations that rapidly change, or sometimes are characterised by chaos. A head nurse's skills to lead decision-making in ethical dilemmas, and nurses, affect the success of the ward. These leadership and management skills, as well as social competence, are reasons related to the application of particular leadership style(s) when head nurses make decisions in ethical dilemmas (Hendel et al., 2005). Head nurses recognise the meaningfulness of personal qualities as personal reasons, which are interrelated with head nurses' decision-making in ethical dilemmas (Frankel, 2008).

Organisational/institutional reasons incorporate the organisational climate and culture, where nurses' influence in the organisation is related to their actions within ethical dilemmas when they make decisions. The head nurses identified the following organisational reasons that are related to ethical dilemmas, when they need to make decisions: distributing limited resources; resource allocation in terms of better staffing; situations in which is it more harmful than beneficial to continue treatment; and transferring patients to other facilities (Bégat et al., 2005). In an organisation, the nursing influence could be seen through a head nurse's acting in decision-making not only in ethical dilemmas (Frankel, 2008). Head nurses are more likely to be involved in decision-making in ethical dilemmas when they perceive themselves to have higher levels of influence in their practice environments and higher levels of concern about the ethical aspects of clinical situations (Torjuul & Sorlie, 2006). Nurses who emphasise consideration of morally relevant aspects of individual patient situations and de-emphasise adherence to abstract standards, rules, and policies in an organisation/institution also are more likely to be involved in dilemma resolution (Penticuff & Walden, 2000).

Managerial reasons are inseparable from a head nurse's engagement in a moral endeavour and their experiences in confronting the challenges by making the right decision and taking the right action within ethical dilemmas. When head nurses cannot do what they think is right, which means that when they experience the lack of autonomy and respect at work, then they experience moral distress that leaves a

moral residue and negatively correlates with their leadership in decision-making within ethical dilemmas (Corley, 2002). The reasons for decision-making within ethical dilemmas include preserving integrity, comfort and well-being, learning and professional transcendence (Bégat et al., 2005).

2.2.3 Consequences of applied leadership styles in ethical dilemmas, when head nurses make decisions

Most research on leadership styles is not related to head nurses and/or their decision-making within ethical dilemmas. Ideas about the consequences of applying the leadership styles in ethical dilemmas are mentioned by some authors, for example, cooperation and peer support (Schluter et al., 2008) from democratic leadership, and supervision (Magnussen et al., 2002) from coaching leadership, influence a lesser experience of moral distress experiences among head nurses making decisions.

The autocratic style emphasises compliancy and control. As a consequence here it is expected that nurses will obey the head nurse's orders (Veer et al., 2013). The head nurse could ask nurses' opinions on how to find a solution to a problem in the ward. Usually s/he has already made a decision, which is not changed by the opinions of the nurses. The head nurse does not think it necessary to explain her decisions (Casida & Parker, 2011).

Implementation of coaching leadership with reflection and feedback, or affiliate leadership with positive relationships, is associated with evident consequences such as reduction of moral distress and the empowerment of the head nurse together with nursing staff to make decisions effectively with ethically difficult situations (Pauly et al., 2009). Coaching leadership application in ethical dilemmas correlates with head nurses' and the nursing staff's self-belief, self-awareness, self-management, personal integrity, and the ability to enable others (Williamson, 2009). This leadership style fosters emotional intelligence, responsibility, motivation and deeper understanding of patient relationships and nurses' identity and role (Frankel, 2008). When a head nurse makes decisions in ethical dilemmas, s/he also pays attention to nurses' professional skills and encourages them to study further. Both nurses' competence and a head nurse's leadership skills influence the development work on the ward (Casida & Parker, 2011; Tomey, 2009). It is useful to clarify what kind of needs the ward and nurses had for additional education and

to draw up an education plan to equip them to be successful in leading ethical dilemmas. This plan is a meaningful basis to guide the nurses to necessary training. It is each nurse's duty to share the new knowledge with colleagues (Vesterinen et al., 2012).

Democratic leadership applied by head nurses has an influence on how externally-orientated the nurses are and whether they have connections outside the ward (Raup, 2008). Application of democratic together with affiliate leadership within ethical dilemmas helps the nursing staff to work cooperatively towards their shared goals, releases their tensions and harmonises misunderstandings (Hendel et al., 2005). The nurses have an opportunity to voice their opinions and take part in problem solving and decision-making. However, the head nurse is ultimately expected to be the decision-maker (Rice et al., 2008). There are different perceptions of the nurse managers' positions in these leadership styles. On the one hand, nurses are deemed to be responsible for the work unit and to make reasonable decisions after discussion with the employees. On the other hand, head nurses do not stand out as managers, but as team members. This means that the head nurse's own tasks could be of secondary importance (Tomey, 2009). Planning together with the personnel forms a basis for nurses' commitment to work (Cowden et al., 2011). All these aspects mentioned are consequences of democratic and affiliate leadership application in ethical dilemmas by head nurses.

A consequence of charismatic leadership is to cause followers to imitate the leader's behaviour, values, self-concept, and perceptions. Charismatic leadership affects the general risk propensities of followers in dilemma situations. Followers then tend to assume greater risk with charismatic leaders than they would with other types of leader (Chenand & Baron, 2006). Another effect of charismatic leadership on followers is to cause them to set or accept higher goals and to have greater confidence in their ability to contribute to the achievement of such goals in concrete ethical dilemma situations. Then nurse followers develop their self-confidence (Lussier & Achua, 2010).

Supportive behaviour between head nurses and the nursing staff through sustainable and transformational leadership influences higher level job satisfaction (Cummings et al., 2010), and instrumental rule-based behaviour from autocratic and bureaucratic leadership are related to lower level of job satisfaction among head nurses (Veer et al., 2013). Transformational leadership shapes and alters the

goals and values of nursing staff to achieve a collective purpose to benefit the nursing profession and the employing health care organisation. This style of leadership correlates with such consequences as decision-making effectiveness, job satisfaction and motivation of nursing staff (Frankel, 2008).

2.3 Conclusions from the literature review

The literature review shows the gap between knowledge about ethical dilemmas, leadership styles and decision-making. It can be concluded that the literature does not inform about leadership styles in ethical dilemmas among head nurses on the ward, but speaks about ethical decision-making, effectiveness of leadership styles, and ethical dilemmas in clinical practice. This means that there appear to be no dominant leadership styles among head nurses when they make decisions in ethical dilemmas. But it is evident from the literature that transformational, sustainable, coaching, and democratic leadership styles in general positively influence nurses' satisfaction at work, cooperation, and self-awareness, and empowers their participation in decision-making. Autocratic, bureaucratic, laissez-faire leadership styles are on the opposite side as these styles in different ways destabilise the psychological climate at work, and break head nurses' self-confidence. The research literature accentuates that head nurses' skills to reflect, perceive, understand, and to change their leadership style flexibly within the ethical dilemma context, influence the work effectiveness on the ward and nurses' job satisfaction.

Decision-making in ethical dilemmas requires leadership skills from head nurses, and there is no one right leadership style which could be best or the 'rule' and the 'best example' in every situation. Every ethical dilemma is unique and every time head nurses need to be able to diagnose the problem and to lead these ethical dilemmas differently. Head nurses need to cope with the variety of ethical dilemmas and to see it in a context of learning on the job, developing and improving competencies in order to satisfy the needs of the patient, the health care institution and the nursing profession. So the present research is needed to identify the issues and explore the experiences of head nurses regarding the application of leadership styles in ethical dilemmas when they make decisions.

3 Aims of the study

The overall study purpose was to identify the issues and explore the experiences of head nurses regarding the application of leadership styles in ethical dilemmas when they make decisions.

The study objectives were:

1. To describe the ethical dilemmas in leadership and examine the relationship between leadership styles and decision-making within health care.

2. To deepen the knowledge about ethical dilemma experiences of head nurses when they make decisions in ethical dilemmas.

3. To explore the factors that are associated with the application of leadership styles when head nurses make decisions in ethical dilemmas.

The research questions were:

1. How is the ethical dilemma and its levels in a health care context characterised? (Article I)

2. What are the issues related to decision-making when head nurses manage ethical dilemmas? (Article II)

3. What reasons and consequences are associated with the application of particular leadership styles in ethical dilemmas?

3.1. What are reasons for head nurses to apply the leadership styles when they make decisions in ethical dilemmas? (Article II and IV)

3.2. What are consequences of the leadership styles applied by head nurses in ethical dilemmas? (Article II and IV)

4. What leadership styles do head nurses apply in ethical dilemmas? (Article III)

4 Material and methods

4.1 Design

The study was divided into three phases, namely systematic literature review, qualitative research and quantitative research, which were performed under the conception of mixed method design with the concurrent nested strategy in which the equal weight and focus was on both qualitative and quantitative methods (Creswell, 2003). In accordance with Creswell (2003) the qualitative and quantitative data were collected and analysed simultaneously, but separately, and the qualitative (Article II) and quantitative (Articles III and IV) findings were not compared, but presented as autonomous empirical outcomes.

The research process lasted from 2009 to 2014 and was divided into three phases (Table 4).

Table 4. Phases, timing of the study, procedures, and articles

Phases	Years	Procedures	Articles
I.	2009-2010	Process: systematically reviewing the literature. Outcome: described ethical dilemmas and its levels in health care.	I -
II.	2011-2012	Process: searching for a data collection method. Outcome: decision to apply the format of unstructured written reflections.	-
	2012-2014	Process: conducting the qualitative research. Outcome: explored and described the head nurses' issue areas regarding decision-making experiences in ethical dilemmas.	II
III.	2010-2011	Process: developing the quantitative tool. Outcome: developed questionnaire with closed-ended questions.	-
	2011-2012	Process: piloting the quantitative tool (questionnaire). Outcome: validated and finalised the questionnaire.	-
	2012-2014	Process: performing the quantitative research. Outcome: explored factors that are associated with application of leadership styles and diagnosed reasons and consequences of applied leadership styles in ethical dilemmas.	III, IV

In Phase I, the systematic literature review was conducted. In the final phase (n=21) articles from Medline and PubMed databases were selected for analysis (2009-2010) (Figure 1).

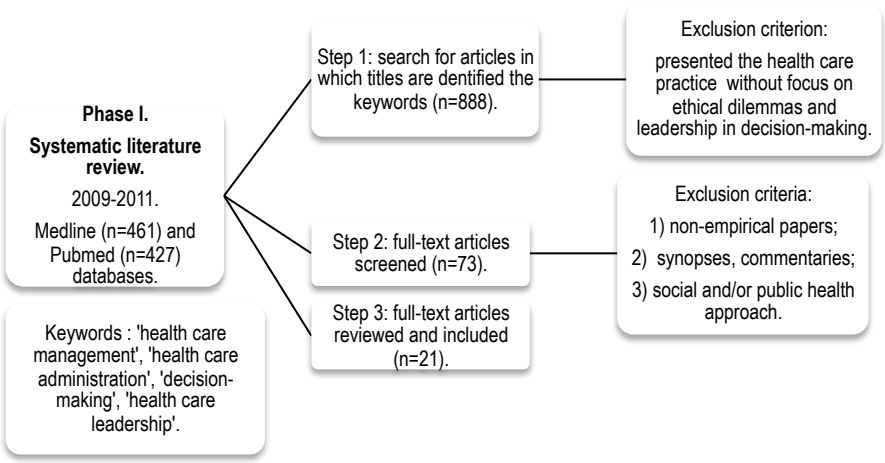

Figure 1. Phase I: systematic literature review

In Phase II, the qualitative study was implemented with head nurses (n=49) working on wards in major hospitals and primary health care centres in five major cities in Lithuania. Data were collected from unstructured reflections written by head nurses. Conventional inductive latent qualitative content analysis was applied to the data (2010-2014) (Figure 2).

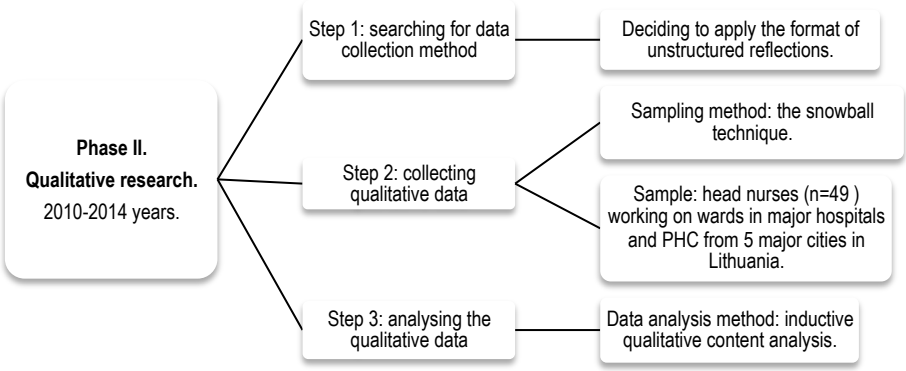

Figure 2. Phase II: qualitative research

In Phase III, the quantitative study was conducted with head nurses (n=278) working in five major state-funded clinical hospitals in each of the five regions of the country (Lithuania) surveyed (2010-2014).

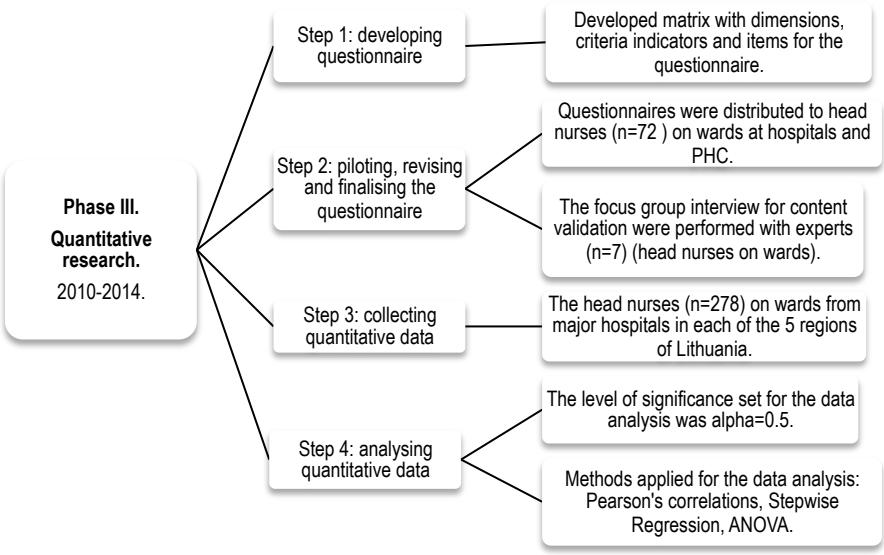

Figure 3. Phase III: quantitative research

4.2 Setting and sampling

Phase I

The systematic literature review was conducted in Phase I (Figure 1). Systematic reviews are used to answer well-focused questions about clinical practice. The systematic review uses explicit and rigorous criteria to identify, critically evaluate and synthesise all the literature on a particular topic (Cronin et al., 2008).

A systematic review should detail the time frame within which the literature was selected, as well as the methods used to evaluate and synthesise findings of the studies in question (Parahoo, 2006). In order for the reader to assess the reliability and validity of the review, the reviewer needs to present the precise criteria used to (Article I): i) formulate the research question; ii) set inclusion or exclusion criteria; iii) select and access the literature; iv) assess the quality of the literature included in the review; v) analyse, synthesise and disseminate the findings. The total sample of full-text articles (n=21) was included into systematic literature review (Article I).

Phase II

The settings for the qualitative research (Figure 2) were chosen as the major hospitals and primary health care centres from five major cities in Lithuania. The snowball sampling technique was applied in the study. This non-probability form of snowball sampling is a widely employed method in qualitative research on hard-to-reach populations (Heckathorn, 2011). The success of this sampling depended on the initial contacts made by the researcher.

Four steps were performed in the sampling (Dragan & Isaic-Maniu, 2013) namely: (1) drafting up a participation programme (likely to be subject to change, but indicative); (2) approaching stakeholders and asking for contacts by finding contact people (those in health care institutions open to research); (3) gaining contacts and asking them to participate by explaining to them about the research aim and delivering covering letters to the head nurses willing to be involved in research so that they would be free to decide about participating in the study, and sending their acceptance or refusal to participate in the study by e-mail to the researcher; (4) continuing snowballing with contacts to gain more stakeholders as necessary. The sample size was increased until no new insights from the data were generated (Mason, 2010) (Article II).

The total sample was n=49 head nurses working on wards in major hospitals and primary health care centres from five major cities in Lithuania. The research participants were n=7 head nurses from each of the five major hospitals (total n=35) and n=2 head nurses from each of the seven major primary health care centres (total n=14). All the research participants were women.

The work experience in the head nurse's position among the research participants varied from 1.5 to 28 years (mean=15.72). The educational background varied, and included professional BA in nursing, college level (n=15), BA in nursing, university level (n=13), n=21 acquired general nursing education in medical schools, and 17 had an MA in nursing, public health, social work, management, education, or psychology; 4 had studied twice at the BA level during their professional careers and acquired two qualifications (e.g. nursing and additionally public health, psychology, social work, education, and management) (Article II).

Phase III

The settings of the quantitative research (Figure 3) were the five major (number of beds per hospital varied from 874 to 1.033) state funded hospitals in each of the five regions of Lithuania. The respondents were head nurses (n=278) working in these five hospitals. Statistically, the sample size was calculated so as to be representative of the population with 5 per cent standard error and 95 per cent confidence level. The required sample size estimated by power analysis was 182 subjects.

The head nurses (n=278) had acquired their nursing qualifications at polytechnics (38.5%), colleges (23.0%) and universities (28.8%) with Bachelor's degrees in nursing, social work, public health, epidemiology, midwifery or education, and 9.7 per cent had completed Master's studies in nursing, public health, education or midwifery. The participants represented 21 specialisations. Most of the head nurses were working in general medicine (25.9%), surgery (20.5%) and psychiatric nursing (12.2%). Their mean age was 31.0 years (SD 8.9) and mean experience in administrative positions 4.46 years (SD 1.94) (Articles III and IV).

4.3 Instruments

Before the development of the instrument for the quantitative research in Phase III (Figure 3) the matrix with parameters such as sections, dimensions, characteristics, criteria and indicators were created. All these parameters were developed on the basis of literature review (Article I) and the descriptive literature review.

The structure of the matrix for the quantitative instrument with sections of reasons, actions and the consequences is related to the decision-making process in ethical dilemmas and consists of the following components: situation, options, choice, acting and evaluation of outcomes (Lyon et al., 2000; Vroom, 2000). These components of the decision-making process in ethical dilemmas are incorporated under particular sections of the instrument: i) demography and reasons include dimensions, characteristics, criteria and indicators that are related to situation and options; ii) actions emphasise the choice and the acting; iii) consequences are

related to the evaluation of outcomes. The matrix consisted of four sections and six dimensions (Table 5).

Table 5. Structure of the matrix for quantitative instrument development

Section	Dimension
SECTION 1: DEMOGRAPHY	Dimension 1: demography of research participants who lead the decision-making in ethical dilemmas
	Dimension 2: demography of research participants where they lead the decision-making in ethical dilemmas
SECTION 2: REASONS	Dimension 3: head nurse-staff interaction-related reasons to apply the leadership style when making decisions in ethical dilemmas
	Dimension 4: organisation-related reasons for applying the leadership style in decision-making in ethical dilemmas
SECTION 3: ACTIONS	Dimension 5: actions through leadership styles' application when head nurses make decisions in ethical dilemmas
SECTION 4: CONSEQUENCES	Dimension 6: complex consequences of the applied leadership styles when a head nurse makes decisions in ethical dilemmas

Every dimension incorporated the different number of characteristics. Every characteristic consisted of different criteria and every criterion included specific indicators. The instrument consisted of 36 questions each including a particular number of statements. The instrument consisted of 180 statements in total (Appendix 2). The statements were measured on a Likert-type scale ranging from 1 (totally disagree) to 5 (totally agree). The sections of the instrument were four: i) background; ii) reasons for decision-making in ethical dilemmas; iii) leadership style-based actions for decision-making in ethical dilemmas; and iv) consequences of leadership style-based actions (Articles III and IV).

The background questions were focused on research participants' age, educational level, years of working in a nurse manager's position, and the specialism of the ward (28 statements in total).

The reasons included 87 statements in total (nurse-related factors (10 statements), the ward-related factors (20 statements), head nurse-related factors (44 statements), organisation-related factors (13 statements)).

The actions consisted of 40 items and concerned different styles such as autocratic, laissez-faire, bureaucratic, coaching (supervisory), charismatic, democratic (participative), affiliate (particular), sustainable, authoritative (expert) and transformational styles (each style included 4 items).

The consequences incorporated 25 items related to experience of professional authority (4 statements), satisfaction of needs (3 statements), improved competencies through decision-making (8 statements), improvement of management competence (5 statements), and experiences of controversial consequences (5 statements).

4.4 Data collection

Phase I

The research literature (articles) search was conducted in two databases, namely Medline and Pubmed (1998-2008). The search was implemented using the following keywords: 'health care management', 'health care administration', 'decision-making', and 'health care leadership'. The keywords were combined using the Boolean operator AND or OR with the second keyword 'ethical dilemma' (Article I). The search for the articles was conducted in three steps (Figure 1). Only English-language-based articles published in peer reviewed journals internationally and/or nationally were selected for further review (Article I).

Phase II

The data were collected in the format of unstructured written reflections (Swartzendruber-Putnam, 2000; Patton, 2002), in which the research participants wrote their narratives (Singh, 2008), as the human experience is always narrated (Moen, 2006) (Article II). The data collection with written reflections (narratives) was a single one-off event, with no intention to re-contact the research participants (Corbin & Strauss, 2008). Head nurses from hospitals and primary health care institutions were instructed (Appendix 3) to describe situations in which they had experienced ethical dilemmas with the focus on issues and leadership in the decision-making process within it. The completed narrative was e-mailed to the researcher.

Using e-mail as a research tool offers to researchers advantages such as easy access to sample participants, low administration costs, and unobtrusiveness (Houghton et al., 2003). The primary advantage of this tool is 'friendliness' to research participants because they were not constrained to synchronous

communication but could respond when and how they felt comfortable (Selwyn & Robson, 1998). E-mailed narratives offered the considerable practical advantage of providing 'ready-transcribed' data. E-mail narratives suffered from a lack of tacit face-to-face communication (Houghton et al., 2003). This linked to the decision of the researcher to select the qualitative content analysis as a research method to the data (Article II). In total, the researcher received 49 reflections from 49 individuals.

Phase III

Data were collected by a statistically validated questionnaire distributed to all head nurses (n=344) in five major hospitals in Lithuania. The response rate was 83 per cent. SSPSS 20.0 for Windows was used to process the collected data (Article III and IV).

4.5 Data analysis

Phase I

The descriptive content analysis was performed to classify the data by the characteristics deemed the integration of theoretical importance and methodological parameters within the systematic literature review (Garg et al., 2008; Whitlock et al., 2008) according to research questions. (Article I).

Phase II

The unstructured written reflections were analysed using inductive qualitative content analysis, as there is not enough prior knowledge about the research subject. The primary purpose of the inductive approach is to allow research findings to emerge from the frequent, dominant or significant themes inherent in raw data, without the restraints imposed by structured methodologies (Thomas, 2003).

Then the categories were derived from the data in inductive content analysis (Elo & Kyngäs, 2007). There are no systematic rules for analysing data and the key feature of inductive content analysis is that the many words of the text are classified into much smaller content subcategories (Elo & Kyngäs, 2007), which could be interconnected with themes (Thomas, 2003) that could be also named as clusters (Attride-Stirling, 2001) or dimensions (Russel & Gregory, 2003). The

qualitative data analysis was performed in 2 steps, which focus on the research questions (Article II):

Step 1. The analyses were guided by the following research question: 'In what situations have head nurses experienced an ethical dilemma in their decision-making?' The written reflections were read through carefully; the analysis started by selecting the unit of analysis (Attride-Stirling, 2001; Lambert & Lambert, 2012), which in this research was decided be at least one sentence. The data were coded according to every unit of analysis (called subcategories 1), and then the interrelated subcategories 1 were grouped into codes such as subcategories 2. Following which, similar subcategories 2 were grouped together into categories. And, finally, the categories were grouped into themes. Subcategories and themes were labelled according to their content. During the analysis, the characteristics associated with head nurses' experiences of ethical dilemmas in decision-making emerged as themes. The categories framed the content of themes.

Step 2. In this phase the focus was on the second research question, namely 'What are the reasons, actions, and consequences in the context of decision-making in ethical dilemma situations?' However, the themes and categories were created in the second phase and the data analysis continued with the focus on categories only. Then the categories were grouped in every theme into three groups such as reasons, actions and consequences in ethical dilemmas when head nurses make decisions.

Phase III

The various statistical analysis procedures were performed. The level of statistical significance set for the analysis of the data was $\alpha = 0.05$. Pearson's correlation was applied to reflect the degree to which the variables in the questionnaire such as 'reasons' and 'actions' were related. Spearman's correlation as a non-parametric measure was used to reveal the statistical dependence between two variables such as 'reasons' and 'actions' (Bryman, 2012). Stepwise Regression was used in order to find the most parsimonious set of predictors (reasons and actions, which mean the applied leadership styles) that are most effective in predicting the dependent variables (consequences). A norm of not less than 40 cases was used for each independent variable. (Article III).

The multivariate procedure factor analysis in the study was applied in order to disentangle complex interrelationships among variables and identify which variables go together as unified concepts (Hevey, 2011) regarding leadership styles. The rotated factor matrix is what the researcher worked with in interpreting the factor analysis. Factor analysis is a statistical procedure for reducing a large set of variables into a smaller set of variables called clusters. Every cluster, called a factor, represents a relatively unitary attribute or dimension (Polit & Hungler, 1999).

Prior to the ANOVA test, Levene's Test for Equality of Variances is performed. If the Levene test is positive ($P<0.05$) then the variances in the different groups are different (the groups are not homogeneous) and researcher needed to use a non-parametric statistic (Armitage et al., 2002). The results of the ANOVA are presented in tables (Appendices 5 & 6; Articles III & IV), followed by the F statistic and associated P value. The P value was less than 0.05 then the researcher accepted the hypothesis that the means of at least two of the subgroups differ significantly (Sheskin, 2004).

Stepwise Regression was useful in finding relationships that have not been tested before. ANOVA was applied to confirm the differences (Heavey, 2011) in the consequences of the leadership styles among head nurses according to the reasons for its application in ethical dilemmas (Article IV) and in the application of leadership styles regarding the demographic variables such as incidence of ethical dilemmas, specialism of the ward, work experience, age, and education.

4.6 Ethical considerations

Phase I

This phase was focused on the systematic literature review. The ethics were the important consideration in systematic literature analysis. When the systematic literature review was carried out then the ensuring of the accuracy and fairness of published works by researchers (Dickson et al., 2013) was the important concern. Though the precise referencing of the used content of particular articles in systematic review was the primary goal.

Ethical responsibilities for systematically working reviewers are related to thoroughness in searching, checking all details, and following up on suspicions arising from different results, inaccuracies, questionable publication ethics, and conflicts of interest (O'Mathúna, 2008) and redundant or duplicate publications (Wager & Wiffen, 2011). In order to avoid these ethical issues the following steps were performed: i) publications for systematic literature review were searched only in official international data bases, which were officially used by the University of Tampere and Vytautas Magnus University (VMU); ii) the articles with access to their full texts were reviewed; iii) the original empirical articles that are published in scientific journals were selected for review; iii) the articles in which the ethical approvals, informed consent and the aspect that there is no conflict of interest mentioned, were included in the literature analysis.

Phase II

For the qualitative study ethical approval was received from the Board of the VMU (Lithuania) in 2011-08-26 (Protocol No. 9) for qualitative data collection and in 2012-04-16 (Protocol No. 7) for publicity.

The study was conducted with autonomy, justice, beneficence and non-maleficence and informed consent as the basic principles in nursing research (Richards & Schwartz, 2002; Olsen, 2003). The head nurses participated in the research on a voluntary basis. The head nurses e-mailed their agreements to the researcher, who explained what the participants were required to do in the research by sending them written information on the research purpose and ethics. All their reflected narratives on experiences of ethical dilemmas were received from research participants by e-mail and collected in one file accessible only to the researcher. In the process of qualitative data collection head nurses were guaranteed confidentiality of their responses. The head nurses have been given pseudonyms such as R1, R2. Any information which could be assumed to identify the particular health care institution, and the persons who were participants in ethical dilemmas, was eliminated from the written reflections. Examples are specific titles of health care institutions in which head nurses work, names or surnames of individuals as representatives of health care personnel who were related to particular ethical dilemmas narrated by head nurses. All the identifying information such as records with names, e-mail addresses, pseudonyms and other identifying information with regard to head nurses was stored on personal

computer. The pseudonyms, user names, domain names and other personal identifiers were known only to the researcher of this study in order to maximise the confidentiality of research participants.

Phase III

Ethical approval for piloting was received from the Board of the VMU (Lithuania) (2010-06-28, Protocol No. 36). The quantitative study had the relevant permissions of the five institutions involved and the required ethical statement from the VMU board was received that the study could be conducted (2011-08-26, Protocol No. 9).

Informed consent, right to refuse or withdraw from the study, confidentiality and anonymity of the participating head nurses were duly ensured during the research process (Fouka & Mantzorou, 2011) (Appendix 4). Head nurses were informed about the purpose of the study and about the survey research organisation: data collection and analysis, voluntary participation, right to withdraw, assurance of confidentiality, and details about the content of the study. For example, where the quantitative data will be used, who is responsible for storing the data, and who can access the data. Head nurses were provided with the e-mail address of the researcher in order to ask questions about any concerns they had. The questionnaires were coded and included no identifying information. The anonymity of the participants was also protected by the use of codes in data analysis. No outsiders have had any access to the questionnaires and data collected.

5 Results

5.1 Ethical dilemma and its levels related to decision-making in health care leadership

In the literature, the term 'ethical dilemma' with the focus on decision-making in health care leadership is used to denote problems or issues with an ethical dimension with no specific definition (Article I). Researchers study the reasons for ethical dilemmas instead of focusing on the definitions in order to show the situations and contexts in which they occur and the consequences of experienced ethical dilemmas. For example, there are situations when staff members do follow their moral decisions, but in doing so they clash with, e.g. legal regulations. In these cases moral distress as a consequence of experienced ethical dilemma occurs (Kälvemark et al., 2004). Authors of research studies on ethical dilemmas use 'ethical issues' without providing the differences between terms 'ethical dilemma' and 'ethical issues' and use them alternatively (Article I).

The research resources lack the descriptions and definitions of ethical dilemmas regarding decision-making in nursing and especially by head nurses. The description of ethical dilemma in health care leadership and in nursing leadership differs. The health care context is understood as general and wide, and the ethical dilemmas are focused on three levels (Article I):

i) institutional level, which includes issues among health care personnel, patients, their relatives, the organisation and its management team;

ii) national level, which is related to professional activities of physicians as core representatives of health care system;

iii) political and local interface level, which incorporates the local and national economic contexts that influence the decisions of health care politicians.

5.2 Issues related to decision-making when a head nurse manages ethical dilemmas

Findings showed that head nurses made decisions in ethical dilemmas in order to justify the trust of patients, institution and society in the nursing profession. Results revealed several issues (Phase II) that are experienced by head nurses when they make decisions in ethical dilemmas (Article II):

Taking the risks in deviating from the formalities for the head nurse is related to the reason when patients are in critical situations and help needs to be delivered immediately. In such a context, a head nurse undertakes personal responsibility and is ready to face the consequences. These actions build the patients' and their relatives' trust in nurses' competence and create opportunities for them to demonstrate their knowledge and expertise. The consequences are related to the 'intensification of professional solidarity among nurses' or to the 'psychological distance between nurses and the physicians' community'.

Balancing power and humaneness is experienced in situations when conflicts arise among nurses; the head nurse balances power and humaneness. She mediates 'by establishing the atmosphere of peaceful coexistence' and 'strives to influence the changes in nurses' behaviour by empowering them for collaboration, teamworking, mentorship, and respect for human dignity'. In some cases, the head nurse 'applies administrative power against the nurses who are destructively disposed'. In other cases, the head nurse empowers herself to mediate in the conflicts among nurses by initiating conversations or developing a 'peace' culture. Through conflicts among nurses, the head nurse perceives their violation of nursing ethics and deontology and balances between the wish to mediate and help the nurses to resolve the conflict or to withdraw by leaving the troubled process.

Maintaining the interprofessional hierarchy is manifested through interactions between the head nurse and nursing staff on the ward, for example, being obedient and loyal to hospital management without the support of nurses, exerting pressure on nurses concerning obedience to hospital management. Simultaneously with balancing power and humanity, the head nurse 'cares about personal administrative status, is obedient to the decisions of the hospital and department executives, and maintains obedience' among nurses regarding informal inter-professional subordination to physicians.

Managing resistance to change is urgent in situations when a head nurse implements a culture of reflection and open discussion among nurses on the ward, encourages the nurses to see their daily practices as opportunities for learning at work; work as learning. In the culture of nurse obedience, 'it is difficult to implement changes regarding nurses' autonomy, decision making, teamwork, collaboration, reflection, and discussion' because nurses are resistant to change and feel safe by 'leaving everything as it is', as 'changes take a lot of additional time and endeavour'. When the head nurse stipulates the change in nursing by 'shifting it from passivity and obedience to activity and autonomy, collaboration and teamwork', she observes 'non-verbal protest' among nurses as the changes mean 'hard work' and 'self-empowerment to build the self-confidence'.

By *managing the resistance to change*, the head nurse initiates self-empowered learning at work through experience and reflection, and establishes an atmosphere of competition among nurses with the focus on quality and outcomes. The head nurse experiences helplessness in cases when differences between her and nurses' attitudes and expectations occur. However, she experiences a triumph when the teamwork culture becomes acceptable for nurses and they empower themselves for leadership by participating in changes.

Managing with limited options is focused on interactions between the head physician and nurses, and the head nurse and head physician on the ward. The head nurses manage with limited opportunities and experience pressure from the head physicians on the wards, as s/he should 'implement unilateral decisions with the focus on physician's power', and nurses 'do not have a voice in decision-making concerning a patient's state of health'. Executive decisions 'limit the improvement of nurses' competence through experience', 'break their professional image in society', and 'limit the interchange of interprofessional knowledge through practice and collaboration'.

Experiencing the decline in nurse's professional and/or human dignity for a head nurse means that s/he observes disrespect for the nursing profession and conflicts between nurses and patients. However, nurses keep silent, as 'they should be servants to patients' which may mean 'nurses' indifference to, or protest against, the policy and culture in a health care institution'. The head nurse experiences moral and psychological difficulties in her work in the hospital atmosphere 'where

the nursing profession is discriminated against and the nurse's professional and human dignity is diminished'.

5.3 Leadership styles in decision-making when a head nurse manages ethical dilemmas

Mostly head nurses apply the democratic leadership style, as autocratic leadership is not popular among head nurses when they make decisions in ethical dilemmas: Standard deviation (SD): autocratic SD=2.38, laissez-faire SD=1.96, bureaucratic SD=2.53, coaching SD=1.84, charismatic SD=2.12, democratic (participative) SD=1.69, affiliate (particular) SD=2.06, sustainable SD=1.98, authoritative (expert) SD=1.93, transformational SD=1.83.

Application of leadership styles in ethical dilemmas was related to such background factors as a head nurse's age, education level, work experience in administration, (head nurse's) position on ward, and wards' specialisms. No significant differences in age groups regarding application of leadership styles were found. Nevertheless the findings showed that the application of democratic, coaching and bureaucratic leadership styles in ethical dilemmas are meaningful to head nurses (Appendix 5, Table 1). Bureaucratic leadership was acceptable in all age groups of head nurses in ethical dilemmas. Head nurses in age groups from 51 years old rarely apply coaching and democratic styles when make decisions in ethical dilemmas. Autocratic, laissez-faire, coaching and authoritative styles are typical for head nurses in the age group from 20 to 30 years (Article III) when they make decisions in ethical dilemmas (Appendix 5, Table 2).

No significant differences were revealed in education level-based groups of head nurses regarding application of leadership styles in ethical dilemmas. Nevertheless the findings showed that the application of coaching leadership style in ethical dilemmas is associated with the educational level of head nurses when they made decisions (Appendix 5, Table 3). Coaching leadership was mostly applied in ethical dilemmas when head nurses with Bachelor level education made decisions. When head nurses with medical school (vocational) and college (non-university higher education) level made decisions, then they applied democratic leadership. Affiliate leadership was meaningful to implement in ethical dilemmas

for head nurses with Bachelor's and Master's degree education level (Appendix 5, Table 4).

The application of leadership styles in groups of head nurses differed significantly according to their managerial work experience when they made decisions in ethical dilemmas. Implementation of bureaucratic, charismatic, sustainable and authoritative leadership was strongly associated with the head nurse's work experience. Use of transformational, democratic, laissez-faire and autocratic styles was also meaningfully associated with this demographic factor (Appendix 5, Table 5). Different leadership styles applied according to head nurse's managerial work experience were: democratic leadership, implemented when head nurses' work experience is between 1-3 and 16-20 years; laissez-faire style, used when head nurses work in a head nurse's position from 3-5 or 21-25 years; authoritative and transformational leadership, applied by head nurses with experience of 16-20 to 21-25 years; bureaucratic style, practised by head nurses with 21-25 years of experience; coaching, charismatic, sustainable, affiliate and transformational styles, applied when head nurses with 16-20 years of experience make decisions in ethical dilemmas (Appendix 5, Table 6).

The significant differences between ward specialisms and applied leadership styles were found by head nurses when they make decisions. These leadership styles were the following: bureaucratic, charismatic, democratic, affiliate, sustainable, authoritative and transformational (Appendix 5, Table 7). Typical were transformational, authoritative, sustainable, democratic and bureaucratic leadership styles for head nurses in intensive medicine and care wards. Authoritative, sustainable, affiliate and bureaucratic leadership styles were applied on wards of general therapy (Appendix 5, Table 8). The leadership styles applied in ethical dilemmas were probably based on the premise that head nurses apply various styles with regard to the specific context and situation.

5.4 Reasons to apply leadership styles when a head nurse makes decisions in ethical dilemmas

Different reasons were related to the application of different leadership styles in ethical dilemmas when head nurses made decisions. The incidence of ethical dilemmas was the reason to apply autocratic, bureaucratic, charismatic and

authoritative leadership (Article IV, Appendix 6, Table 1). Results showed that a higher incidence of ethical dilemmas strongly correlates with the application of primitive leadership styles such as autocratic and bureaucratic (Appendix 6, Table 2).

Recognition of a head nurse's authority on the ward was the reason (Article II) to apply mostly affiliate, authoritative and transformational styles (Article IV). The head nurse's participation in teamwork on the ward is the most evident reason to implement the coaching style in ethical dilemmas (Appendix 6, Table 3). Reflection was the most meaningful reason (Article II) in applying transformational leadership. The opportunity to develop organisational competence was the strongest reason to apply charismatic leadership.

Head nurses' satisfaction after decision-making was the reason to use all leadership styles in ethical dilemmas except laissez-faire (Appendix 6, Table 3). Organisational ethical values was the only reason to apply democratic leadership styles when head nurses made decisions in ethical dilemmas. Personal head nurse's attributes most strongly correlated with application of an affiliate style.

Results highlighted the following strongest correlations between the application of particular leadership styles and particular reasons (Appendix 6, Table 3): i) autocratic and bureaucratic leadership with head nurses experiencing satisfaction after decision-making in ethical dilemmas; ii) laissez-faire with a head nurse's participation in teamwork with nurses and a head nurse's opportunity to develop organisational competence; iii) coaching, charismatic and affiliate with all the reasons except the value of organisational ethics; iii) democratic with all the reasons, but the strongest is with head nurse's opportunity to develop organisational competence; iv) sustainable, authoritative and transformational with all reasons except the value of organisational ethics and a head nurse's personal attributes, and the strongest correlation was with a head nurse's opportunity to develop organisational competence. From findings it was evident that the most meaningful reason was the opportunity to develop organisational competence when head nurses made decisions in ethical dilemmas.

5.5 Consequences of applied leadership styles when a head nurse makes decisions in ethical dilemmas

Consequences were related to the application of various leadership styles in ethical dilemmas when head nurses made decisions. Coaching, charismatic, democratic, affiliate, sustainable, authoritative, and transformational leadership were significantly correlated with the head nurses' experiences of professional authority by making decisions in ethical dilemmas. Authoritative leadership was characterised by strongest correlation with head nurses' experiences, and primitive leadership styles such as autocratic, laissez-faire and bureaucratic weakly correlated with head nurses' experiences of professional authority.

The most significant correlation was between competence improvement and the application of authoritative leadership. Authoritative leadership has the strongest influence on managerial competence improvement in ethical dilemmas (Appendix 7, Table 1). Application of authoritative leadership was stronger than transformational style in influencing the increase of hospital management respect for a head nurse when she made decisions in ethical dilemmas (Article IV).

The head nurse's self-dignity strongly (Article II) correlated with the applied authoritative and transformational leadership (Appendix 7, Table 2). No single one of the leadership styles correlated with the satisfaction of nurses' personal needs, when they made decisions in ethical dilemmas. Coaching, charismatic, democratic, affiliate, sustainable, authoritative, and transformational styles significantly correlated with the satisfaction of nurses' professional needs in ethical dilemmas. A strong correlation is found between satisfaction of patients' relatives' and the ward's needs and application of charismatic leadership (Appendix 7, Table 2). Application of charismatic, democratic, coaching, affiliate, sustainable and transformational styles correlated quite strongly with the improvement of a head nurse's competence in a variety of areas such as teamwork, social, management, administrative, educational, professional, leadership and ethical (Article IV).

The strongest influence on improvement in competence was manifested in particular correlations when head nurses made decisions in ethical dilemmas (Appendix 7, Table 3): i) application of sustainable leadership and the improvement of teamwork competence; ii) implementation of affiliate style and improvement of management as well as administrative competence; ii) realisation

of authoritative leadership and improvement of educational, professional, leadership and ethical competence.

No one leadership style strongly correlated with the establishment of competence development for nurses and creation of the strategy for finance allocation on the ward regarding the head nurse's decision-making in ethical dilemmas. Application of sustainable leadership strongly influenced development of a communication system on the ward. Affiliate and sustainable styles had the strongest influence on the establishment of team-working culture on the ward. Transformational leadership was the most influential on the encouragement of leadership among nurses on the ward, when head nurses made decisions in ethical dilemmas (Appendix 7, Table 4). Application of autocratic leadership significantly correlated with a head nurse's experienced satisfaction (Article IV).

Application of charismatic leadership most strongly correlated with the satisfaction of patients' needs when head nurses made decisions in ethical dilemmas. Charismatic leadership was most influential on the satisfaction of patients' relatives' needs and the head nurse's professional expectations. The application of autocratic leadership in ethical dilemmas had the strongest influence on implementation of administrative rules and responsibilities (Appendix 7, Table 5). Autocratic leadership most strongly helped to decrease the gap between the organisational and nursing values when head nurses made decisions in ethical dilemmas.

6 DISCUSSION

6.1 Validity and reliability of the study

The adequacy of the study process is judged by the validity and reliability of the results (Fossey et al., 2002). The validity of this study is considered with regard to internal and external validity, and objectivity. Internal validity refers to whether findings manifest meaningful relationships reflecting the real world (Shenton, 2004). External validity refers to the conclusion validity, which is the degree to which conclusions we reach about relationships in our data are reasonable (Polit & Hungler, 1999). Validity of the findings refers to objectivity. In this research is essential that findings and conclusions are substantiated by research data (Burns & Grove, 2009). Reliability in the qualitative research phase means the degree of consistency or dependability with which an instrument measures the attribute it is designed to measure (Polit & Hungler, 1999). In the qualitative research phase the reliability or trustworthiness was assured by the relevance and adherence to methodological preciseness (Shenton, 2004).

Phase I

Reliability or trustworthiness in the systematic literature review (Article I) was assured by the quality of the systematic literature review process in relationship to the accuracy of the research question of the study and the systematic review question (Burns & Grove, 2009). Also, the validity was guaranteed by the search strategy, inclusion and exclusion criteria, and the quality of the original studies (Whittemore, 2005). The progression of the process was presented clearly in review phases (Magarey, 2001).

The types of study included in the review play a major role in determining the reliability of the results, and the validity of estimates of effect is linked to the study design in which the inclusion and exclusion criteria must be developed (Grant & Booth, 2009). In the systematic review there were formulated particular inclusion and exclusion criteria with the only focus on one type of publication, namely

original evidence-based research articles. Also the inclusion criteria were set to ensure that the boundaries of the review question ('How is the ethical dilemma concerning decision-making within health care leadership defined?') are clearly defined (Rooney et al., 2014).

Methodological quality was assured by searching for the best quality of empirical evidence (whatever study design/s were presented in analysed articles) and the conclusions drawn available in articles published in international scientific journals with impact factor (Allen et al., 2011). This means that the quality of published research articles was formally assessed by peer-review procedure, and this aspect is related to assurance of reliability in systematic literature review. The systematic literature review started by searching for research-based publications (articles) according to the particular keywords ('health care management', 'health care administration, 'decision-making', 'health care leadership'), which were combined with the second keyword 'ethical dilemma'. These keywords were chosen because they corresponded to the following research question 'How is the ethical dilemma and its levels characterised in a health care context?' The correspondence between the keywords or main themes and the research question is one of the requirements to keep in line with the internal validity in the systematic literature review (Allen et al., 2011). The systematic literature review study was characterised by some limitations:

The publications were searched only in two databases, namely Medline and PubMed. The core argument for this decision was to be detached from the social research and the rigid medicine-focused and experiment-based studies regarding decision-making and ethical dilemmas in health care (which could be found in databases such as Science Direct, Cochrane Library, Ebsco Host, ERIC) and to search for original articles with high research impact.

The focus of the study was multidisciplinary and complex in the integration of four concepts: 'decision-making', 'ethical dilemma', 'health care leadership', and 'health care management'. These concepts are still not studied as an integrated unity. This motivated the researcher to highlight all mentioned concepts at three specific levels: institutional, national, and the political and local interface, which were identified in the analysed literature.

The methodologies of research studies in articles were different with qualitative, quantitative and mixed designs at all analysed levels. Research participants mostly

were physicians, while nurses (especially those in administrative jobs) rarely participated in studies; nor did other health care staff, such as physiotherapists, health psychologists etc. These aspects limited the possibilities of comparability between sites, sample participants and research methodologies.

The systematic literature review covered only studies in the English language. The ideal for most systematic reviews is to include all available relevant evidence. In principle, this includes studies written in any language (Systematic Reviews, 2009). However, to include all relevant studies regardless of language is not always possible due to a lack of time, resources and facilities for translation. The language restrictions or the scope of the research literature only in one, usually English, language do not appear to give rise to bias (White et al., 2012).

Phase II

Trustworthiness

Reliability in qualitative studies is referred to as 'trustworthiness' (Fossey et al., 2002). In this qualitative study the trustworthiness (Article II) was confirmed by the relevance to methodological thoroughness in the research process (Shenton, 2004). The trustworthiness of this study was based in the conducting of the inductive content analysis (Elo & Kyngäs, 2007) when qualitative categories derive from the written reflections. In the unstructured written reflections (Patton, 2002) research participants (head nurses on the wards) wrote the narratives that manifest their experiences of the professional life world (Moen, 2006). Trustworthiness in qualitative research is reviewed by 'reliability' and 'validity', but instead of these terms using others such as 'credibility', 'dependability', 'confirmability' and 'transferability' (Long & Johnson, 2000; Rebar et al., 2011).

Credibility

The researcher was thoroughly familiar with the research object, terminology, and context of 'leadership of head nurses in making decisions in ethical dilemmas', which increased the credibility of the study because the primary knowledge and understanding of the research object empowered the researcher to develop new understandings (Rebar et al., 2011). The researcher's awareness of head nurses' work context in the Lithuanian context minimised misunderstanding (Burns & Grove, 2009) about the research object.

The researcher's prior research knowledge about leadership in nursing, and the outcomes of the systematic literature review, were the basis for developing the idea of the data collection format and the qualitative sub/categories in data analysis by combining it with the study purpose (Burns & Grove, 2009). Dividing the categories into ethical dilemma situations, reasons, actions and consequences according to the particular research questions such as 'In what situations have head nurses experienced an ethical dilemma in their decision-making? What are the reasons, actions, and consequences in the context of decision-making in ethical dilemma situations?' ensured the validity of the data analysis.

The credibility of using the inductive latent content analysis method was taken into account carefully through following precisely the qualitative content data analysis phases and development of subcategories and integrating them into categories (Attride-Stirling, 2001). The research participants had the necessary expertise when the sample was related to research purpose and research questions, which means that the sample of head nurses was suitable for qualitative research (Burns & Grove, 2009). The involvement of head nurses in research study was satisfactory and their participation was voluntary, because they were totally free to decide whether or not to send the written reflections to the researcher. The assurance of the ethical principle of 'voluntary participation' was closely related to credibility in qualitative research (Rebar et al., 2011). The researcher was not intrusive with the direct participation in data collection, which meant that the researcher did not influence the way of research participants' thinking and writing of narratives. Then the research participants were free to choose the experience they wanted to narrate in unstructured written reflections (Patton, 2002) about the authentic experienced ethical dilemmas and decision-making practices in such a context.

Dependability

Dependability was guaranteed through presenting all phases of qualitative data collection and analysis accurately and clearly (Holloway & Todres, 2005). The adequacy of the data collection was ensured by giving the opportunity for head nurses to choose freely their authentic experience and narrate it in a reflection format without direct contact with the researcher at the time of writing (Holloway, 2005). The use of two languages, namely Lithuanian and English, in this study has been considered carefully. The preciseness was pursued in translations from

Lithuanian to English starting from the plain texts of all narratives and then the analysis in both Lithuanian and English languages was implemented. After this step, the comparison of analysis outcomes (sub/categories) in both languages was performed in order to keep the content of meanings the same in spite of language and to ensure that meanings of terms in both languages corresponded to the head nurses' original expressions.

Using unstructured written reflections as a data collection format in this study was meaningful for capturing a variety of descriptions (Sparkes, 2005) about head nurses' experiences regarding decision-making in ethical dilemmas. Head nurses expressed their opinions, attitudes, values, emotions, situations or cases in narratives (Sparkes, 2005) in which their diverse expressions were accepted by the researcher (Bowen, 2008) and this is the most valued feature of the unstructured reflection (Patton, 2002). Head nurses' descriptions were characterised by a sophisticated approach to their leadership and decision-making in ethical dilemmas, but in the texts of narratives there were also surface descriptions that functioned as referential aspects.

Confirmability

The validity of findings was confirmed by the analytical preciseness (Burns & Grove 2009). The qualitative data were complex because of the variety of research participants' experiences that were expressed in narrative-based (Sparkes, 2005) written reflections. The analysis required the attention of the researcher to the head nurses' narrated experiences and the general perspective, which was expressed through qualitative themes (Shenton, 2004). The authentic expressions of head nurses in the format of quotations of original data have been presented (Polit & Beck, 2010) (Article II). The independence of each category and the quotations representing head nurses' experiences when they made decisions in ethical dilemmas were presented precisely to reflect the accuracy of the data analysis.

The interpretations of the qualitative data were the basic evidence for the trustworthiness of the findings and conclusions (Maltby et al., 2010). The themes and sub/categories of descriptions were formulated and expressed through the interpretations of the researcher. The confirmability of the analysis when reporting the research process was ensured through its clarity (Holloway, 2005; Sparkes, 2005; Rebar et al., 2011).

Transferability

Transferability is related to the generalisability of the data and the extent to which the findings are applicable in other contexts (Streubert Speziale et al., 2011), which in the end has to be determined by readers (Polit & Beck, 2010). The working status/position of head nurses on the wards and their basic education were quite similar, and their representation of the biggest hospitals from five regions of Lithuania was meaningful; thus, the purposive snowballing sample was representative. Despite this fact, the methodological arguments manifest the attitude that the qualitative findings cannot be applied directly to a larger population in their current form (Burns & Grove, 2009), because they were unique to the context of this study (Streubert Speziale et al., 2011).

Transferability increased by comparing the findings with the existing empirical evidence-based knowledge (Burns & Grove, 2009). The contextual aspects in this qualitative study were considered (Streubert Speziale et al., 2011), because head nurses' experiences were related to their working contexts (Polit & Beck, 2010). Thus, head nurses' reflections on the situations when they made decisions in ethical dilemmas were determined by the context of working settings, which were assumed to correspond to their experiences in these particular contexts (Streubert Speziale et al., 2011).

Phase III

Internal validity

Internal validity refers to the degree to which an instrument measures what it is supposed to measure. Three types of internal validity are typically reported: content, construct and criterion validity (Burns & Grove, 2009).

Content validity

The content validity of the questionnaire in this study was assured in several ways. First, the questionnaire was developed on the basis of the findings from Phase I (systematic literature review) (Polit & Hungler, 1999). Second, before data collection, the content validity of the questionnaire was evaluated in a three-phase pilot study: i) the clarity of the matrix (Appendix 1) with dimensions, characteristics, criteria and indicators for the questionnaire were revised and

discussed with the group in the experts' panel (Polit & Hungler, 1999), which consisted of 7 expert head nurses on the wards. All research participants were female. Their mean of age was 42.43 years and the mean of work experience in head nurse's status was 15.71 years. All participants acquired their nursing education in several institutions: the basic nursing education they received from Medical schools. Bachelor's degrees they acquired at Universities, but in different specialisms: one head nurse graduated with a BA in Education, one received a BA in Social work, and one has two Bachelor's – in Psychology, and in Education. Another four research participants graduated with a BA in Nursing. All head nurses acquired Master's degrees: two in Education, one in Management, one in Nursing, one in Public health, one acquired two MAs in Nursing and Education, and in Public health and Nursing. Two research participants graduated with PhDs: one in Education and the other in Nursing.

Experts recommended not to use some characteristics with their criteria and indicators in the instrument for survey in Lithuania (grey parts of the matrix in Appendix 1). Section 1, dimension 2 - type (private or public) of health care organisation is not actual, because the biggest institutions in which the survey was planned are public. Section 1, dimension 2 - activity area overlaps with the information from the characteristics 2.4. (specialism). Section 3, dimension 5 – criteria and their indicators within the staff level is not essential for this survey because the population and the sample of this study is planned as head nurses/nurse managers on the wards. Based on these assessments, some criteria and indicators were reworded to reduce bias. The piloting of the questionnaire has been implemented in three steps:

Step 1 – pilot questioning survey. Questionnaires were distributed to head nurses on the wards. In the pilot research there were n=72 research participants. Among them the biggest part were 31-40 years old, and the smallest part over 60-year old head nurses on the wards (Table 6).

Table 6. The age of pilot research participants

Age (years)	Frequencies	Percentage (%)
31-40	26	36.1
41-50	21	29.2
51-60	18	25.0
More than 60	7	9.7

All the research participants in the piloting were female. One third of participants acquired high medical school level qualifications in nursing, a quarter of respondents acquired Bachelor's degrees in nursing (university level). One third of head nurses held managerial work status for 11-15 years. Most research participants (91.7%) work in public health care institutions, and the smallest (4.2%) part of them work in private institutions. The health care institutions with mixed status are treated as public, because at least half of the institutional budget is covered by public income from the national budget, and the other part is 'private', because patients pay for specific, specialised health care services. Thus a very small percentage (4.2%) of head nurses from the mixed type of health care institutions participated in the pilot research. The areas where the pilot research participants work are psychiatry (22.2%), general medicine (13.9%), surgery (13.9%), pediatrics (12.5%) and community health (12.5%).

The pilot questionnaire consisted of 203 statements in total. The sections of the tool were background questions and the questions of reasons, actions and consequences of leadership styles when head nurses make decisions in ethical dilemmas. The background questions asked the age, educational level, years of working in administrative positions, level of health care organisation and the health care specialism of the department. The 'background' consisted of 54 statements in total. The 'reasons' included 84 statements in total, the 'actions' incorporated 40 statements in total and the 'consequences' included 25 statements in total. All the items were measured on a Likert-type scale ranging from 1 (totally disagree) to 5 (totally agree).

Step 2 – experts' panel. The expert panel consisted of the same 7 expert head nurses who participated in the assessment of the matrix for the questionnaire. In striving for objectivity, the panel included head nurses on the wards who were not the participants in step 1 of the pilot research. Experts were asked to read the content of the questionnaire and provide recommendations regarding the improvement of questions' and items' statements. Experts provided several recommendations regarding the use of terminology: i) 'the department' to change to 'the ward', ii) instead of 'the chief nurse' to use 'head nurse' or 'nurse manager', iii) 'the ethical dilemma situations' is too long an expression, while the term 'the ethical dilemma' sounds more friendly to the respondent and does not change the meaning of the words, iv) in questions 3 and 7 to add the open statement 'other' so that the research participant would have the opportunity to fill in the exact information in case s/he could not find the 'right' answer among the provided statements. Experts recommended the following steps: i) to reduce the number of statements in the

specific parts of the questionnaire such as 'background' and 'reasons'; ii) to move the part of 'reasons' from question 15 about a head nurse's professional authority in an organisation to question 8 about the nurse-related factors that influence the ethical dilemmas on the ward. Experts recommended improve the 'background' part: i) to shorten the 'background' part, for example, to limit the list of ward specialisms and to provide the open statement for research participants to write their own statement if they do not find it in the list; ii) to provide the open-ended question about respondent's age instead of the closed-ended with statements about age groups of difference in ten years, e.g. '25-25 years old'; iii) to provide the open-ended question about work experience instead of the list of closed-ended questions with the statements of difference in five years, e.g., '1-5 years', '6-10 years'.

The respondents in this pilot study were as identical as possible to those in the actual data collection. Based on the feedback received, some statements were reworded to reduce bias, and the layout of the questionnaire was improved. The step 3 based on the factor analysis is presented in the description of the 'construct validity'.

Construct validity

Construct validity determines whether the instrument actually measures the theoretical construct it is intended to measure. This is the most complex and difficult type of validity (Burns & Grove, 2009). The instrument construct validity could be supported by applying the already existing and validated instrument, but this was not possible.

The application of a validated tool together with the standardisation of the group of head nurses on the wards would serve to increase the generalisability of the results. Even though an increasing number of studies have been published in recent decades on ethical decision-making, ethical management, ethical dilemmas in health care and/or nursing management, most of them do not incorporate such complex components which are the research interest in this study. The previously validated and appropriate instrument regarding the complex phenomenon with the 'head nurse', 'leadership style' 'decision-making' and 'ethical dilemma' was not available for use in this study. The quantitative instrument specially designed for this study is original and unique at international and national level.

The exploratory factor analysis was used in a pilot research to identify complex interrelationships among statement and group items that are part of unified concepts (Polit & Hungler, 1999). The researcher did not make *a priori* assumptions about relationships among factors. The principal component analysis was used for factor extraction. Factor weights were computed in order to extract the maximum possible variance, with successive factoring continuing until there was no further meaningful variance left. Then the factor model was rotated for analysis (Burns & Grove, 2009). Outcomes of the factor analysis in the piloting study were satisfactory and created opportunities for the researcher to reword some statements.

Criterion validity

Criterion validity means that results obtained by the tool can be proportioned to and reflected against the results obtained by another instrument measuring the same research topic (Polit & Hungler, 1999). In this study, such reflection was impossible because the findings of the systematic literature review and the additional literature search yielded no tool which could have been used in this study. The instrument developed in this study was original and applied for the first time only in this research for data collection.

To obtain an overall picture of the research object under study, the quantitative data were collected from the target population of head nurses on the wards at the biggest hospitals from five regions of Lithuania. Criterion validity could have been further enhanced by exploring decision-making experiences in ethical dilemmas of head nurses who work in variety of hospitals and primary health centres in all mentioned regions. Head nurses from all types of health care institutions are the core resource to receive the important data because they deal with ethical dilemmas every day. However in this study it was decided to focus only on head nurses who work at hospitals, the biggest ones, which represent all the five regions of the country under study.

External validity

External validity means the generalisability of the research findings beyond the sample used in the study (Burns & Grove, 2005). This study was conducted in five regions of Lithuania and in the biggest hospitals where the most advanced and high quality specialised health care services are provided.

In this study the specific interest was to highlight head nurses' experiences on the wards when they have to make decisions in ethical dilemmas; what kind of leadership styles they apply in these situations; what are the reasons to apply the particular leadership styles; and what are the consequences of the decision to apply a particular leadership style. The present quantitative research implemented a cross-sectional design, but could be followed up in a longitudinal setting to see what particular leadership styles help head nurses to make decisions in ethical dilemmas effectively, and what kind of specific impact is related to the application of the particular leadership style in ethical dilemmas. Also, it would be important to be more focused on the experiences and practices of head nurses in different groups according their age, educational level and work experience in managerial position.

Another important aspect is the sample size (Burns & Grove, 2005). In this quantitative research the researcher strived to involve the total sample of the target hospitals and head nurses (n=335) within these hospitals. Statistically, the sample size was calculated so as to be representative of the population with a 5 per cent standard error and 95 per cent confidence level. The required sample size estimated by power analysis was 182 subjects. In the research more than the minimum requirement of power analysis for the sample participated, exactly n=278 head nurses. The overall response rate was high (HdN=83%) (Polit & Hungler, 1999). However, the external validity could have been enhanced by including head nurses from other hospitals in the five regions.

Reliability

The reliability of the quantitative instrument (questionnaire) can be tested with Cronbach's alpha coefficient (Burns & Grove, 2005). The internal consistency and reliability of the instrument developed for this study was tested with Cronbach's alpha, giving values of 0.603 to 0.951 (Article III and IV).

The length of the instrument may also have a bearing on the reliability of the results (Burns & Grove 2005). In this study, the instrument consisted of 36 questions with 180 statements in total. It is possible that the length of the instrument and research participant fatigue have affected the reliability of the responses (Polit & Beck, 2010). Another factor that may have detracted from reliability is that some of the statements in the instrument were quite difficult and required recall. In spite of the length and difficulty of the statements, the questionnaires (instruments) had been carefully filled out and there were only a few

missing data statements. In addition, none of the respondents contacted the researcher by e-mail to ask for more information about the instrument. Generalisations from the results of this quantitative study could be made with caution. Further studies should work with larger samples of head nurses to receive more in-depth information about the issues when head nurses make decisions in ethical dilemmas and apply particular leadership styles in such situations.

6.2 Comparison of the research findings with earlier studies

6.2.1 Ethical dilemma and its levels related to decision-making in health care leadership

Outcomes of the systematic literature review (Article I) showed that there is no empirical research with the focus on relationships between head nurse, leadership style, decision-making and ethical dilemma.

In ethical dilemmas the decision-making is the core process, which is closely related to leadership (Buerhaus et al., 1996; Cummings et al., 2005; Casida & Parker, 2011; Cowden et al., 2011) in health care generally and in nursing leadership specifically. Then it is not a simple process for the head nurse to make a choice between at least two possibilities, as is mostly declared in all the general definitions of 'ethical dilemma'. This 'choice' in real nursing and/or health care leadership context means the 'decision-making' process, which involves social, moral, psychological and the physical dimensions of the leader (Kidder, 1995), which are inseparable from the leader's thoughts, emotions, and values (Glaser, 2005). This process involves much more, such as the level at which the decision-making must be implemented. In most research resources only the individual level such as nurse's (De Casterle et al., 2008; Dewolf Bosek, 2009; Murray, 2010), head nurse's (Hendel et al., 2005; Curtis, 2011) or physician's (Lo et al., 2000; Horst et al., 2007) is mentioned and the ethical dilemma solution through decision-making is presented. This shows that research resources mainly provide the personalised (Graham & Jack, 2008) or professionalised (Force, 2005) view of decision-making in ethical dilemmas, but the focus on the *situation* and the *context* still lacks attention in the scientific literature.

Head nurse's decision-making in ethical dilemmas and her/his leadership in

such situations must be shifted from the personal level to the institutional or national, or the political and local interface levels by the head nurse's choice with regard to the situation and the context (Article I). The Head nurse's job requires viewing leadership and decision-making in ethical dilemmas from a wider perspective, because s/he must make choices and make decisions in order to satisfy the needs of different ethical dilemma participants, such as patients, patients' relatives, nursing personnel, health care institution etc. In addition, the health care institution is related to two levels of ethical dilemma, namely the institutional (internal) and the national (external) because the consequences of decision-making in ethical dilemmas create the reputation of the institution in society.

6.2.2 Issues related to decision-making when head nurse manages ethical dilemmas

The issues of head nurses leading the decision-making in ethical dilemmas relate to the following areas: taking risks in deviating from the formalities; balancing power and humaneness; maintaining the professional hierarchy; managing resistance to change; managing with limited options; and experiencing the decline in nurse's professional and/or human dignity (Article II).

Taking risks in deviating from the formalities. Head nurses experienced dilemmas in situations when they exceeded formal responsibilities by acting for the sake of patients and the nursing profession, and striving to support patients. This illuminated their devotion and commitment to patients and to the mission of nursing profession, and their anxiety regarding their work position was not highlighted. These findings differ from Clunie's (2006) results, which show that some decisions may be risky in terms of keeping a head nurse's own job. But this author does not specify the context of such decisions and does not explain the risks.

Head nurses' decisions 'to take a risk' showed that they were ready to take responsibilities for the consequences. It is evident from these findings that head nurses are moral leaders for nurses and head nurses' behaviours in ethical dilemmas can encourage or discourage nurses to act as leaders in similar situations. Mathena (2002) sees this kind of behaviour modelling of head nurses as the

direction of nursing staff attitudes toward patients, nursing and the health care organisation.

Balancing power and humaneness. Head nurses experienced limitations regarding autonomous action, because they were dependent on the decisions of the head physicians on the wards. The other limitation on autonomous action by head nurses came from decisions of the management or executives of the health care organisation. Head nurses stated that any attempts to discuss or oppose the executive's decisions were treated as a conflict, which may lead to negative consequences for the head nurse's status at work, and incidentally result in their losing the job. Such an institutional context manifested the repression of leadership, which limited head nurses' possibilities to act autonomously and confidently. The aspect of repressing leadership is related to findings of Roberts (2000) who notes that the behaviour of an oppressed group is important for empowering nurses. But research findings did not support the idea that oppression empowers nurses. The findings showed the contrary effect, that the head nurse and nurses lost their self-confidence when they experienced oppression from the head physician or hospital management.

Nurses were morally exhausted by experiencing day-to-day oppressive leadership from physicians and at the same fulfilling expectations regarding the implementation of new approaches at work. Then nursing staff were oriented toward work routine and had no motivation to implement innovations. The head nurse's issue was to lead this situation and to empower the nurses. Then s/he used their formal power to influence nurses and to foster the implementation of innovations. Here head nurses balanced formal power with humaneness without focusing on nurses' satisfaction. These findings match both the results of Kuokkanen & Katajisto (2003) who found that head nurses associate higher work status with power, and the Kan & Parry (2004) research outcomes that head nurses in decision-making are focused only on satisfaction of professional needs and expectations.

Maintaining the professional hierarchy. Head nurses attempted to support the professional dignity and identity of nurses through empowering them for interprofessional collaboration and teamwork with physicians. The team-working or parity-based professional collaboration between nurses and physicians was still an objective. Head nurses thought that collaboration reduces the issues of

communication between nurses and physicians. In this context the interprofessional power relations in the context of collaboration and communication were the issue for head nurses in managing ethical dilemmas. Krairiksh & Anthony (2001), Boyle & Kochinda (2004), Lindeke & Sieckert (2005) recognise that the interprofessional relationship between health care personnel influences the quality of collaboration and communication.

Managing resistance to change. Head nurses experienced the nurses' resistance to change regarding professional development and competence improvement. Head nurses understood the reasons for nurses' resistance, such as the gap between advanced nursing theories and existing nursing practice, work overload, lack of autonomy, low salaries, and the nurses' position that they learn a lot from practice by acting. But head nurses also understood their responsibilities related to managing the nurses' professional development. Nilsson et al. (2001) mention similar issues regarding nurses' resistance to change: low autonomy and distrust of theoretical studies because nurses believe in their own learning by doing.

Managing with limited options. The research findings revealed that the lack of autonomy caused the diminishing of work satisfaction and raised feelings of professional discrimination. The research findings of this study reflected on a head nurse's work reality, where s/he has limited possibilities to apply managerial and leadership competencies and actions, and to make autonomous decisions. Internationally health care organisations depend on the recruitment of competent nurse-managers (Contino, 2004), which means that the health care institution trusts the head nurse and lets her/him make responsible and autonomous decisions (Hader, 2011). In Lithuania the health care context here is the 'asymmetry' in organisational expectations (external aspect) and the work reality of a head nurse (internal aspect). The institution may see the head nurse's and nurses' work as operational (Greiciene & Petronyte, 2013). This opposes the findings of Santric Milicevic et al. (2011) who note that the primary responsibilities of the nurse executive position should be strategic, and not operational.

Experiencing the decline of nurse's professional and/or human dignity. Head nurses continuously experienced disrespect for the nursing profession, and observed the conflicts between nurses and patients, patients' harassing of nurses and nurses' detachment from nursing ethics. Head nurses observed the disparagement of nurses' professional dignity. Nevertheless, in this health care context, which

manifested limited respect for nursing, head nurses encouraged nurses to act ethically. These issues are related to respect as a virtue of honouring someone and experiencing dignity by caring for others (Decelle, 2009) and being confident in professional practices (Jacelon & Henneman, 2004). The findings of the present study interrelate with the results of Aitamaa et al. (2010), who say that nurses experience dignity when they work in a culture of honesty, trust, respect, and loyalty. In the present study head nurses expressed the opinion that nurses' self-confidence and dignity are related to the profession and personality and this cannot be achieved without nurses' professional pride and self-respect.

Head nurses were focused on initiatives to develop collaboration between nurses and patients, as well as between physicians and nurses. In the Lithuanian context the physicians' attitudes to nurses influence patients' attitudes to nurses (Jakstiene & Jonaitiene, 2005). This aspect highlighted the relationships between disrespect for the nursing profession and informal inter-professional subordination, which is, according to Decelle (2009), not detached from respect and involves both behaviour and action.

The issues of head nurses' leading in decision-making in ethical dilemmas on the wards are inseparable from the contextual areas that reflect the societal, health care system, and organisational attitudes towards nursing management and leadership, the nursing profession and head nurses' work status in health care organisations.

6.2.3 Application of leadership styles in ethical dilemmas

Research findings revealed that head nurses applied a variety of leadership styles regarding the ethical dilemma context. Also the research outcomes made evident the fact that the way the head nurse applies different leadership styles in ethical dilemmas not only influences nursing staff morale and productivity, but it also affects the decision-making and problem-solving processes with the focus on patients', institution's and nurses' needs.

The application of *autocratic leadership* style was associated with the variables of age and work experience of head nurses. Research findings showed that head nurses in the 20-30 year-old age group and with work experience up to 11 years applied this style when they made decisions in ethical dilemmas. This style for them

was not the only one, but one among others. From study results is evident that head nurses started their work career tending to be strict in this style. These findings agree with the results of De Hoogh & Den Hartog (2009), Van de Vliert (2006) who say that it is inherent to apply autocratic leadership for head nurses who require obedience, subordination, and keeping everything in hand.

The *laissez-faire leadership* style was relevant to the head nurses in the age group who started work on completion of their education and have less work experience. These results could be interpreted in two ways: i) head nurses lack the managerial and administrative competencies, and are progressing towards leadership responsibility, or ii) they act in reactive way by using the 'hands-off' approach (Frandsen, 2013).

The *bureaucratic leadership* style in this research was acceptable in all age groups, with more work experience (11 years and over), of head nurses. These findings supported the notion of Ojokuku et al. (2012) that application of bureaucratic style is typical of a mature work culture. Taking also in account the empirical fact that this leadership in the present research was relevant to the intensive medicine and care unit, the application of the bureaucratic style in ethical dilemmas could be treated as a positive aspect, because the focus on structure and procedures is related to the stable work culture (Grimsley, 2014). The popularity of bureaucratic leadership manifests the culture of the ward, which is very structured, hierarchical, organised, systematic, and based on power and control with clearly defined responsibilities and authority (Rashid et al., 2003).

The application of *coaching leadership* was typical of nurses in the younger 20-30 year-old age group with Bachelor level education. The findings manifested that head nurses made decisions in ethical dilemmas by valuing the participation of a team and experiencing compassion through coaching the development of others (Boyatzis et al., 2006). The results also showed that nurses starting their managerial career at the institution were oriented to the goal by developing a culture of creativity and competence development (Horner, 2002) on the ward, and they related these aspects to the development of self-confidence (Murray, 2013) among nursing staff. For head nurses the coaching style in ethical dilemmas was a key part of their role and behavioural habits (Boyatzis et al., 2006).

The implementation of *charismatic leadership* in ethical dilemmas was characteristic of more experienced head nurses, whose work experience is 16 years

and over. These findings created the assumptions that more 'mature' head nurses in ethical dilemmas have a vision and are able to motivate (Marquis & Huston, 2009) the nursing personnel to participate in decision-making and 'give space' to nurses to act creatively regarding (Lussier & Achua, 2010) the context and situation. The results of the present study also showed that head nurses with more work experience were effective in communicating with the personnel and were self confident, because the concept of charismatic leadership, according to Ojokuku et al. (2012) is based upon communication and the strength of personality. Thus, application of charismatic leadership when head nurses make decisions inhibits overload and stress in all participants involved (De Hoogh & Den Hartog, 2009) in ethical dilemma.

Democratic leadership was relevant to head nurses with medical school and the college level education, with less work experience in head nurses position and in intensive medicine and care units. These findings manifested that head nurses were oriented to nursing staff involvement in decision-making in ethical dilemmas by giving them responsibility and accountability (Frandsen, 2013). It also showed that for head nurses with less work experience relationships with others were important, and this style created opportunities to learn together and with others through experience (Gupta & Singh, 1999).

The implementation of *affiliate leadership* was typical of head nurses with higher levels of education such as Bachelor's and Master's university degrees and in a variety of ward specialisms. These results could mean that head nurses with a higher educational level were more oriented to modern leadership-based decisions in ethical dilemmas through teamwork, effective communication and values by increasing the morale (Murray, 2013) of nursing personnel on the ward. Also such findings could manifest that head nurses with a higher educational level trusted the nursing staff and thought that everybody was aware of their responsibilities and competence development, and they could offer advice to employees to maintain harmony on the ward (Goleman, 2002). Thus the application of the affiliate style could improve the poor performance (Murray, 2013) of nurses in ethical dilemmas when the implementation of competence adequately to the situation in decision-making is the primary concern for both nurses and the head nurse.

Sustainable leadership was used by head nurses who were more experienced, and worked on intensive medicine and care wards, as well as general medical therapy.

Such findings pointed out head nurses who were more self-confident with management and leadership and were able to balance the short-term decision with long-view planning and carefully reflect on (De Vulpian & Dupoux-Couturier, 2008) the ethical dilemmas at a time of decision-making and after it (Skarie, 2013).

Authoritative leadership was accepted by head nurses from all age groups when they made decisions on the wards with a variety of specialisms. The findings showed that head nurses trusted nursing staff and gave them the freedom to choose their own means to achieve a positive outcome (Oliver, 2006) and helped to manage stressful situations (Goleman et al., 2001) in ethical dilemmas.

Transformational leadership was applied by head nurses who are less experienced and work on units of intensive medicine and care. These results highlighted that inexperienced head nurses were strongly oriented to the staff members (Marquis & Huston, 2009) on the ward and were open to learning from others (Ismail et al., 2009). Also it showed that head nurses were capable of encouraging (Frandsen, 2013) the nursing personnel to act with self-confidence when they need to make decisions in ethical dilemmas.

Work experience in the head nurse's position together with age group are important variables in choosing the leadership style for decision-making in ethical dilemmas and acting together or without the nursing staff.

6.2.4 Reasons for head nurses to apply the leadership styles when they make decisions in ethical dilemmas

Reasons for head nurses to apply different leadership styles in ethical dilemmas when they make decisions were the following: recognition of the head nurse's authority; the head nurse's participation in teamwork; the head nurse's reflection on decision-making; the head nurse's opportunity to develop organisational competence; the head nurse's experience of satisfaction after decision-making; and the value of ethics in the organisation (Article IV).

Recognition of the head nurse's authority was associated with the application of the transformational style in ethical dilemmas in this research. This correlation was the empirical evidence-based argument that the head nurse should be the authority, because without it is impossible to motivate the followers to act and manage the

situation creatively (Marquis & Huston, 2009). Recognition of authority seems to be a struggle for nurses, no matter their work position. Nurses' experience and expertise are the most valued aspects in their occupational area (Snelgrove & Hughes, 2000). Nurses are struggling for recognition of their position (Appel & Alcolm, 1999). The finding that recognition of head nurse's authority was associated with authoritative leadership in this research was convincing. This style gives the opportunities to nursing staff to choose their own way of achieving the aim or solving the problem (Goleman, 2002). Being free to make choices in decision-making here is seen as means of fulfilling the desire of nurses for optimal autonomy and recognition in the health care system (Appel & Alcolm, 1999). Research results highlighted that recognition of head nurse's authority was related to affiliate leadership, which was focused on connecting people and repairing broken trust (Murray, 2013). This result corroborates the findings of Bernard & Chin (2000), who found that nursing staff values the importance of expressive behaviours and interpersonal communication, where the traditional task-orientated approach of nursing and the dominance of medicine are perceived as constraints in decision-making.

In the present study teamwork was identified as a key process in decision-making within ethical dilemmas. Other researchers also accentuate that head nurses treat teamwork as a lever for good work in nursing (Miller, 2006) and a key process through which care is managed (Atwal & Caldwell, 2006). In this research the head nurse's participation in teamwork was associated with application of coaching style in ethical dilemmas. In could be seen as a head nurse's focus on nursing staff development and performance improvement through a one-to-one style (Murray, 2013). Being a team member for the head nurse gives the opportunity to influence the development of nursing staff and direct them to the goal achievement through decision-making (Kalish et al., 2007).

The head nurse's reflection on decision-making allowed the assimilation and reordering of concepts, skills, knowledge, and values into pre-existing knowledge structures. When used well, reflection promotes the growth of the individual (Branch & Paranjape, 2002). Research findings showed that a head nurse's reflection on decision-making in ethical dilemmas was the reason to apply transformational leadership. Reflection on the process in sustaining good work was important. Head nurses should encourage nurses to seek positive role models and reflect on the lessons that can be learned from experience (Miller, 2006) in ethical

dilemmas. For decision-making in ethical dilemmas to occur, planning and management should form an integral part of the reflective cycle (Page & Meerabeau, 2000).

Head nurses in the research indicated that the opportunity to develop competence in health care organisation for them was associated with the application of charismatic leadership in ethical dilemmas when they made decisions. From the present research findings it was clear that head nurses saw the opportunity to motivate staff for their own competence development, which meant that the intelligence, educational level and the strength of the head nurse's personality first of all depended on her competitiveness. This point is new in explaining the application of the charismatic style, because the strength of this leadership is seen not from the educational concept, but from the view of creativity, innovation (Lussier & Achua, 2010), vision, and personality (Marquis & Huston, 2009). From research findings it was evident that head nurses did not separate their personality and educational level, competence and continuing competence development.

The findings showed that head nurses experienced satisfaction when they applied autocratic or charismatic leadership in ethical dilemmas. This result was surprising, because in research literature the head nurse's satisfaction was associated with the opposite leadership styles: in the charismatic style one of the core aspects is the interaction (Lussier & Achua, 2010), but in the autocratic style the main characteristic is decisions without considering input from staff (Frandsen, 2013). These results could be explained with the focus on the context of ethical dilemmas in which head nurses should act creatively by involving the nursing staff or to make strict decisions on their own. A head nurse's position power and influence over work coordination had a direct link to intent to stay; structuring expectations and consideration contributed indirectly through the variables of instrumental communication, autonomy, and group cohesion (Boyle et al., 1999). The head nurse's satisfaction regarding the application of cardinally opposite leadership styles in making decisions in ethical dilemmas could be explained as her satisfaction due to greater access to work empowerment structures, which involve opportunity, information, and resources (Upenieks, 2003).

Findings showed that the personal attributes of a head nurse were related to the value of ethics in an organisation through the application of the affiliate style in

ethical dilemmas. Then it could mean that a head nurse is oriented to the creation of an atmosphere of harmony and trust (Murray, 2013) on the ward when decisions need to be made in ethical dilemmas. Affiliate leadership and a head nurse's personal attributes are the 'glue' needed to hold together the ethical work environment on the ward and promote the ethical behaviour of nurses on the basis of trust (Shirey, 2006).

6.2.5 Consequences of the leadership styles applied by head nurses in ethical dilemmas

Consequences of the leadership styles applied when head nurses make decisions in ethical dilemmas were focused on the head nurse's authority, satisfaction of needs, competence improvement, management of controversial ethical dilemmas, increase of hospital management respect, development of communication systems and team-working culture on the ward, encouragement of leadership among nurses on the ward, implementation of administrative rules and responsibilities, and a decrease in the gap between the organisational and nursing values (Article IV).

The relationship between authoritative leadership and a head nurse's professional authority when she makes decisions in ethical dilemmas was the finding which confirmed the assumption that professional and managerial aspects are interrelated in the head nurse's role (Oliver, 2006) and that managerial power by itself does not guarantee the authority of the head nurse (George et al., 2002). Also, findings of the present study supported George et al. (2002) findings that in a head nurse's work, authority is manifested through her autonomy to act and make decisions.

Satisfaction of a variety of needs was strongly associated with the application of authoritative and charismatic leadership. Such correlation showed that a head nurse's capability to interact and motivate the followers (Lussier & Achua, 2010), and recognise their emotional needs (Goleman et al., 2001) in a particular context and situation are related to effective leadership in ethical dilemmas.

In this research the application of authoritative leadership was strongly related to the need for competence development. This finding shows that the ethical dilemma is not only the problem-solving practice, but also the learning context (De Casterle, 2008) through which the head nurse's competence and incompetence are

seen (Fenwick, 2005). The context of ethical dilemma shows the direction for competence development (Gilliland, 2010).

The research outcomes manifested that application of charismatic leadership affects the management of controversial ethical dilemmas. Controversial ethical dilemmas are understood as various dilemmas with a diversity of contexts, situations and participants, as well as social, moral, psychological and physical aspects, which face health care professionals (Lucchetti et al., 2014). This correlation revealed that a head nurse's flexibility, creativity and innovation through applying the charismatic style are the core features, which help to make decisions (Lussier & Achua, 2010) in ethical dilemmas successfully.

In this research results disclose that the application of authoritative leadership in ethical dilemmas increases the respect of hospital management for the head nurse. This finding reveals that in health care institutions in which nurses are structurally and psychologically empowered, and have the opportunity to make decisions, then they are likely to feel respected in the workplace (Faulkner & Laschinger, 2008). Also this finding created the assumption that the head nurse who is respected at the institution is capable of balancing power and humaneness by avoiding emotionally distressing situations (Oliver, 2006), which is the core aspect in authoritative leadership.

The application of sustainable leadership in ethical dilemmas affected the development of communication systems and team-working culture on the ward. This finding from this research shows the importance of the head nurse's presence and involvement (De Vulpian & Dupoux-Couturier, 2008) in decision-making together with the nursing staff. The urgency of the affiliate leadership in teamwork culture creation is not surprising, because this style is directly related to teamworking establishment, implementation and development (Atwal & Caldwell, 2006).

The application of transformational leadership in ethical dilemmas led to the encouragement of leadership among nurses on the ward. This research result showed that the head nurse creates the working environment for nurses in which they may feel self-confident. The encouragement in this context could be understood as 'being supported' (Hagbaghery et al., 2004). All these components have an impact on effective decision-making (Hagbaghery et al., 2004).

The application of autocratic leadership in ethical dilemmas influenced two consequences: i) the implementation of administrative rules and responsibilities, and ii) helping to decrease the gap between organisational and nursing values. The first finding created the assumption that in health care organisations the rules and responsibilities are not discussed, but implemented unconditionally in ethical dilemmas (Steinert et al., 2006). There is no creativity or flexibility, and the variety and controversial character of ethical dilemmas is ignored, with the satisfaction of organisational needs as the priority (Frandsen, 2013). The second finding was asymmetric with the first finding: if the application of autocratic leadership is tolerated in health care institution because this style helps to implement administrative rules (Su et al., 2012), and the patients', their relatives' and nurses' needs are ignored, then nursing values such as caring, compassion, tolerance, respect, dignity (Porter, 2010) with the focus on patients' needs, also are ignored. But maybe this result could be seen as a possible critical perspective for head nurses: if the head nurse uses autocratic leadership, then the nursing on the ward will become hierarchical, structural, manipulated by power, but ignorant of moral values (Lincoln & Holmes, 2011).

Understanding about reasons, actions, and consequences with regard to head nurses' decision-making in ethical dilemmas is inseparable from a variety of variables. These variables are the following: head nurse's self-confidence and expertise, work experience, educational level, managerial competence, leadership skills, collaboration with nurses, teamwork culture on the ward; nurse's opportunities to maintain professional and personal dignity on the ward and in health care institutions; interprofessional cooperation, respect, trust and teamwork; attitude to nursing and nursing leadership in health care organisations; needs of patients, patients' relatives, nurses, head nurses and health care institutions; value of learning through experience, nursing leadership and nurses' empowerment in health care organisations. All these aspects must be integral in health care organisation culture and should be a part of health care policy at local, regional and state levels. Ignorance of those aspects forces head nurses and nurses into the framed and limited, professionally demotivating activity framework in which they are seen as mechanical and obedient performers of nursing techniques.

Understanding relationships between reasons, actions and consequences when head nurses apply leadership styles in ethical dilemmas is useful for reflecting the directions of improvements of nursing management and leadership with the focus

on satisfaction of patients', patients' relatives', nurses' and health care institutions' needs as well as societal expectations regarding the quality of care. For head nurses it is worth involving nurses in the decision-making process when ethical dilemmas are solved in order for them to perceive themselves as having the greater expertise-based power in respect of ethical decisions in their practices.

The leadership styles applied are related to 'explicit' and 'implicit' consequences. The 'explicit' consequences are related to authority, job satisfaction, competencies, and management. The 'implicit' consequences influence the considerations regarding head nurses' openness and learning, trust, interactions, and self-confidence. Traditional view to consequences regarding leadership or leadership styles in ethical dilemmas is directed mostly to the patients, patients' relatives and health care institution. The 'implicit' consequences add to the understanding of impact of leadership styles' application in ethical dilemmas.

The application of leadership style in ethical dilemmas is associated not only with the specific situations, but with some background factors such as years of experience in a head nurse's position on the ward, educational level, ward specialisation and incidence of ethical dilemmas. In future research it is recommended to focus on reasons and consequences of applied different leadership types. From the results it is obvious that head nurses with more experience in the head nurse's position tended to implement the primitive bureaucratic and autocratic leadership styles. These findings manifest the need for head nurses to reflect on their managerial practices and to find meaningful ways or forms to learn from colleagues, patients and their relatives, as well as from health care institution management.

For head nurses in health care organisations, or at educational institutions such as colleges or universities, it is worth developing a leadership course regarding decision-making in ethical dilemmas. This course would add the dimensions of decision-making and leadership styles to traditional understanding about the head nurse's role, leadership and ethical dilemmas. This course also would demonstrate the integrity of ethics, morale, values, leadership and competence of the head nurse when s/he makes decisions in ethical dilemmas. The head nurses in this course would have the opportunity to practise decision-making in ethical dilemmas by analysing unknown areas, discussing the issues and reaching consensus regarding an acceptable course of action.

Research on leadership styles in ethical dilemmas regarding head nurses' decisions is recommended for implementation through concepts of leadership types such as primitive, paternalistic, modern, affiliate, authoritative, permissive, and situational, which incorporate several styles. Such a research focus on leadership would offer researchers the possibility of new discoveries and head nurses opportunities to improve the effectiveness of decision-making in ethical dilemmas through leadership. In addition, it is worth studying decision-making in ethical dilemmas as complex research phenomena with regard to different nurses' positions and roles at work and leadership styles by applying grounded theory. Also in further research it would be valuable to expand the quantitative research internationally by applying the questionnaire which was used in this study, with the focus on validation and adaptation of the instrument internationally. The findings from such research would open up views and understanding about decision-making and the application of leadership styles in ethical dilemmas within health care institutions with regard to different cultures and health care systems.

7 Conclusions

Leadership is related to social, moral and managerial dimensions, personal, institutional and societal levels, and the situation itself, which is associated with the specific dilemma and organisational context. Head nurses' leadership with regard to decision-making in ethical dilemmas still remains largely unexplored, offering researchers opportunities for new research ideas. The complex phenomenon which integrates leadership, decision-making and ethical dilemma has come to occupy the forefront of the discourse coherent with management, leadership and ethics in nursing. Lack of conceptual clarity and contextuality in the descriptions of 'ethical dilemma' regarding nursing leadership and management frames this term into the general definition, and creates limitations in nursing leadership research. Such inaccuracy is also related to limited perceptions of decision-makers of head nurses' leadership in ethical dilemmas at health care institutions, where head nurses are rarely treated in a proper way as leaders with the chance for autonomous decision-making.

Creating and promoting integrity on the ward becomes one of the most important functions of leadership for the head nurse in decision-making. Moral and ethical stances need be consistently reiterated and clarified. Head nurses often have a hard time rebuilding trust and credibility in organisational culture when they make decisions in ethical dilemmas. Head nurses need to pay more attention to the ways in which values and ethics are manifested through decision-making in ethical dilemmas, so that nurses will think that such things are important. Head nurses should recognise that they are leaders and teachers for the nurses on the ward.

Head nurses lead the decision-making in ethical dilemmas with regard to values, multidisciplinary competence, educational level, work experience, interprofessional trust, respect and collaboration, variety of needs, authority and self-confidence, personal attributes, organisational structure and leadership types and/or styles. Issues of decision-making in ethical dilemmas for head nurses emerge in specific contexts and situations that show the assumptions, attitudes and stereotypes in a

health care system that are reflected through health care institutions and the wards in which they work and implement nursing leadership.

The styles can be effective or ineffective in the performance of a leadership role by a head nurse. No one leadership style is applied in ethical dilemmas when a head nurse makes decisions. Usually, head nurses move from one style to another, taking cues from the situation at hand. Some styles, however, are not well suited to making decisions in ethical dilemmas. The application of leadership styles in ethical dilemmas means that ethics and leadership go hand in hand. However, to be successful when making decisions in ethical dilemmas, head nurses need to understand their style of leadership and how this may impact on other ethical dilemma participants. Head nurses as leaders must be aware of their values, morals, and ethics in decision-making and to perceive it at different levels as well as in different contexts and situations. Such understanding can help them to minimise their 'blind spots', which might derail them in a particular situation.

The reasons, actions and consequences with regard to the application of leadership styles when head nurses make decisions are oriented towards the head nurse, nurses, nursing, patients, patients' relatives, interprofessional relationships and the health care institution. All these decision-making orientations, which are involved in the perceptions and choices of the head nurse when she makes decisions in ethical dilemmas, makes this process complicated and tricky. In this context the profound contextual thinking and understanding of the head nurse is of a great importance.

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Appendices

Appendix 1

The matrix for the instrument

Table 1. Matrix of the quantitative tool: sections, dimensions, characteristics, criteria and indicators

SECTION 1: DEMOGRAPHY		
Dimension 1: demography of research participants, who lead the decision-making in ethical dilemmas		
Personal demographic characteristics	Criteria	Indicators
1.1. Education	1.1.1. Acquired professional qualification	1.1.1.1. Educational level
		1.1.1.2. Years of graduation
		1.1.1.3. Study programme
1.2. Work	1.2.1. Work experience	1.2.1.1. Years of work experience in health care
		1.2.1.2. Years of work experience in a certain organisation
		1.2.1.3. Years of work experience in administrative status
	1.2.2. Working status	1.2.2.1. Work position at organisation
		1.2.2.2. Job description at organisation
		1.2.2.3. Accountability to administration of a organisation
1.3. Age	-	1.3.1.1. Age of research participant
1.4. Gender	-	1.4.1.1. Gender of research participant
Dimension 2: demography of research participants where they lead the decision-making in ethical dilemmas		
Organisational demographic characteristics	Criteria	Indicators
2.1. Level	2.1.1. Health care level of organisation	2.1.1.1. Primary health care
		2.1.1.2. Secondary health care
		2.1.1.3. Tertiary health care
2.2. Type	2.2.1. Type of health care organisation	2.2.1.1. Public
		2.2.1.2. Private
2.3. Activity area	2.3.1. Health care activity sphere of a department	2.3.1.1. Counselling
		2.3.1.2. Treatment
		2.3.1.3. Interventions
		2.3.1.4. Medical services
		2.3.1.5. Nursing services
		2.3.1.6. Diagnostics
		2.3.1.7. Education for self-care
		2.3.1.8. Therapies
		2.3.1.9. Other
2.4. Specialism	2.4.1. Health care specialism of the department	2.4.1.1. General practice (therapy)
		2.4.1.2. Surgery
		2.4.1.3. Pediatrics
		2.4.1.4. Psychiatry (mental health)
		2.4.1.5. Intensive care
		2.4.1.6. Palliative care
		2.4.1.7. Midwifery and gynaecology
		2.4.1.8. Oncology
		2.4.1.9. Community (family)
		2.4.1.10. Operating-room
		2.4.1.11. Anaesthesiology
		2.4.1.12. Other
2.5. Experience of ethical dilemmas in	2.5.1. Ethical dilemma-related factor	2.5.1.1. Staff-related factors
		2.5.1.2. Organisation-related factors
		2.5.1.3. Head nurse-related factors
		2.5.1.4. Other

Continuation of **Table 1**

Personal demographic characteristics	Criteria	Indicators
	2.5.2. Experienced frequency and difficulties of ethical dilemma	2.5.2.1. Incidence of ethical dilemma situations
		2.5.2.2. Experienced challenges of ethical dilemma situations
		2.5.2.3. Experienced pressure concerning ethical dilemma situations
		2.5.2.4. Experienced embarrassments concerning ethical dilemma situations
		2.5.2.5. Experienced depth/superficiality of ethical dilemma situations
SECTION 2: REASONS		
Dimension 3: head nurse-staff interaction related reasons to apply the leadership style when making decisions in ethical dilemmas		
Head nurse and the nursing staff related characteristics	Criteria	Indicators
3.1. Professional needs	3.1.1. Professional authority at organisation	3.1.1.1. Respect and recognition of head nurse nurse's profession by staff
		3.1.1.2. Respect and recognition of nurse's profession by hospital management/administration
		3.1.1.3. Respect and recognition of working position by staff
		3.1.1.4. Respect and recognition of working position by hospital administration
	3.1.2. Competence development opportunities at organisation	3.1.2.1. Work in a team
		3.1.2.2. Participation in supervision group meetings
		3.1.2.3. Group discussions on critical cases
		3.1.2.4. Support to participate in scientific events
		3.1.2.5. Support to participate in professional courses
		3.1.2.6. Reflection on personal work
		3.1.2.7. Reflection on employees' work
		3.1.2.8. Reflection in a team
		3.1.2.9. Reflection on hospital administration actions and decisions
		3.1.2.10. Use of hospital library resources
		3.1.2.11. Implementation of 'good practice' within the ward as a resource for competence development
	3.1.3. Administration of obligations at organisation	3.1.3.1. Caring for quality of nursing
		3.1.3.2. Caring for staff work satisfaction
		3.1.3.3. Caring for staff needs' satisfaction
		3.1.3.4. Implementation of the mission and aims of organisation
		3.1.3.5. Initiation of employees' competence development
		3.1.3.6. Administration of budgetary allocation on the ward
		3.1.3.7. Implementation of consultations for staff
		3.1.3.8. Building of positive atmosphere on the ward
3.2. Personal needs	3.2.1. Personal dignity	3.2.1.1. Respect of staff
		3.2.1.2. Respect of hospital administration
		3.2.1.3. Self-respect
		3.2.1.4. Personal values at work
		3.2.1.5. Personal autonomy at work
		3.2.1.6. Supportive attitude to staff
		3.2.1.7. Personal wisdom

Continuation of **Table 1**

Head nurse and the nursing staff-related characteristics	Criteria	Indicators
	3.2.2. Professional satisfaction	3.2.2.1. Psychological comfort at work
		3.2.2.2. Professional autonomy at work
		3.2.2.3. Coordinated workload and professional responsibilities
		3.2.2.4. Experience of a team member at department
		3.2.2.5. Application of competence at work
		3.2.2.6. Coordinated professional and organisational vision
		3.2.2.7. Implementation of professional courage
Dimension 4: organisation-related reasons for applying the leadership style in decision-making in ethical dilemmas		
Organisation-related characteristics	Criteria	Indicators
4.1. Organisational values	4.1.1. Organisational authority in public	4.1.1.1. Organisational openness to society
		4.1.1.2. Public trust to organisational competence
		4.1.1.3. Nursing service-related values at organisation
		4.1.1.4. Nursing staff–related values at organisation
		4.1.1.5. Nursing profession-related values at organisation
		4.1.1.6. Quality of organisational information and communication system
	4.1.2. Organisational ethics	4.1.2.1. Service-related ethics at organisation
		4.1.2.2. Staff-related ethics at organisation
		4.1.2.3. Profession-related ethics at organisation
		4.1.2.4. Monitoring system of ethical principles application at organisation
4.2. Interactions in organisations	4.2.1. Quality of interactions	4.2.1.1. Head nurse and physician practitioner interaction
		4.2.1.2. Quality of head physician and head nurse interaction
		4.2.1.3. Quality of head nurse and physician practitioner interaction
		4.2.1.4. Quality of head nurse and nurse practitioner interaction
		4.2.1.5. Quality of head nurse and hospital administration interaction
SECTION 3: ACTIONS		
DIMENSION 5: actions through leadership styles' application when head nurses make decisions in ethical dilemmas		
Leadership characteristics (styles)	Criteria	Indicators
5.1. Primitive leadership: autocratic	5.1.1. Head nurse's level	5.1.1.1. Head nurses distrust nursing staff when making decisions in ethical dilemmas
		5.1.1.2. Head nurses rely on threats and punishment to influence the nursing staff when making decisions in ethical dilemmas
		5.1.1.3. Limited time spent by head nurses to emphasise the nursing staff tension and/or fear concerning decision-making in ethical dilemmas
		5.1.1.4. The head nurse's need to be coordinated with other department(s) of organisation when s/he makes decisions in ethical dilemmas

Continuation of **Table 1**

Leadership characteristics (styles)	Criteria	Indicators
	5.1.2. Nursing staff level	5.1.2.1. Input of nursing staff into decision-making in ethical dilemma not allowed
		5.1.2.2. Obedience of nursing staff to the head nurse when s/he makes decisions in ethical dilemmas
		5.1.2.3. Dependence of nursing staff on the head nurse when they make decisions in ethical dilemmas
		5.1.2.4. Nursing staff acting under detailed instructions by the head nurse when they make decisions in ethical dilemmas
5.2. Primitive leadership: laissez-faire	5.2.1. Head nurse's level	5.2.1.1. Head nurse's understanding about personal responsibilities by not hoping the nursing staff can cover for her/his in decision-making within ethical dilemmas
		5.2.1.2. Head nurse's provision of regular feedback to let nursing staff know how well they are doing in decision-making within ethical dilemma
		5.2.1.3. Head nurse's trust of nursing staff competence when they make decisions in ethical dilemmas
		5.2.1.4. Head nurse's provision of as much freedom as possible when they make decisions in ethical dilemmas
	5.2.2. Nursing staff level	5.2.2.1. The feeling of security of nursing staff at the availability of a head nurse when they make decisions in ethical dilemmas
		5.2.2.2. Nursing staff experience of being inspired by the head nurse to take pride in their work when they make decisions in ethical dilemma
		5.2.2.3. Nursing staff experience of being valued by the head nurse for trustworthiness and experience when they make decisions in ethical dilemmas
		5.2.2.4. Nursing staff experience of having the power and authority to make decisions in ethical dilemmas
5.3. Primitive leadership: bureaucratic	5.3.1. Head nurse's level	5.3.1.1. Head nurse's avoidance of leadership when s/he makes decisions in ethical dilemmas
		5.3.1.2. Head nurse's autonomous action according to her/his formal work position by avoiding collaboration with nursing staff when s/he makes decisions in ethical dilemmas
		5.3.1.3. Head nurse's avoidance of breaking with standardised procedures and work habits when s/he makes decisions in ethical dilemmas
		5.3.1.4. Head nurse's transferring the responsibility to a higher administrative level when s/he makes decisions in ethical dilemmas
	5.3.2. Nursing staff level	5.3.2.1. Application of only known standards and common general rules by nursing staff when they make decisions in ethical dilemmas
		5.3.2.2. Application of a definite set of procedures by nursing staff when they make decisions in ethical dilemmas
		5.3.2.3. Performance of the routine tasks over and over by nursing staff when they make decisions in ethical dilemmas
		5.3.2.4. Nursing staff rely on acquired work habits when they make decisions in ethical dilemmas

Continuation of **Table 1**

Leadership characteristics (styles)	Criteria	Indicators
5.4. Paternalistic leadership: coaching (supervisory)	5.4.1. Head nurse's level	5.4.1.1. Head nurse's initiating the nursing staff's self-reflections on their strengths and weaknesses when they make decisions in ethical dilemmas
		5.4.1.2. Head nurse's feedback on nursing staff competence when they make decisions in ethical dilemmas
		5.4.1.3. Head nurse's encouragement of the nursing staff for development through personal empathy and self-awareness when they make decisions in ethical dilemmas
		5.4.1.4. Head nurse's delegated assignments to nursing staff when they make decisions in ethical dilemmas
	5.4.1.2. Nursing staff level	5.4.1.2.1. Nursing staff experience of being informed by the head nurse of what is expected regarding the decision-making outcomes in ethical dilemmas
		5.4.1.2.2. Nursing staff experience of help from the head nurse in order to tie together their aspirations and personal goals regarding decision-making in ethical dilemmas
		5.4.1.2.3. Interpersonal help of nursing staff to advance skills in decision-making in ethical dilemmas
		5.4.1.2.4. Sharing knowledge and opinions in decision-making within ethical dilemmas
5.5. Paternalistic leadership: charismatic	5.5.1. Head nurse's level	5.5.1.1. Head nurse's evaluation of the gap between organisation and staff needs when s/he makes decisions in ethical dilemmas
		5.5.1.2. Head nurse's application of personal charm in order to lead the nursing staff through personal persistence and sacrifice when s/he makes decisions in ethical dilemmas
		5.5.1.3. Head nurse's created vision of a better future state regarding decision-making in ethical dilemmas that nursing staff believe
		5.5.1.4. Head nurse's ability to inspire the nursing staff to obtain extraordinary results when they make decisions in ethical dilemmas
	5.5.2. Nursing staff level	5.5.2.1. Self-directed building of the trust among nursing staff through their decision-making in ethical dilemmas
		5.5.2.2. Nursing staff rely on organisation-level perceptions when they make decisions in ethical dilemmas on the ward
		5.5.2.3. Nursing staff experience of being empowered by the head nurse to make decisions through a shared vision in ethical dilemmas
		5.5.2.4. Nursing staff capability to achieve the created vision by the head nurse and to be led by her/him when they make decisions in ethical dilemmas
5.6. Paternalistic leadership: democratic (participative)	5.6.1. Head nurse's level	5.6.1.1. Head nurse's developing the plans to help the nursing staff to evaluate their own actions when they make decisions in ethical dilemmas
		5.6.1.2. Head nurse's encouragement of the nursing staff to be a part of decision-making in ethical dilemmas
		5.6.1.3. Head nurse's encouragement of the nursing staff to grow in decision-making within ethical dilemmas

Continuation of **Table 1**

Leadership characteristics (styles)	Criteria	Indicators
		5.6.1.4. Head nurse's inspiring the cooperation and high morale among nursing staff through decision-making in ethical dilemmas
	5.6.2. Nursing staff level	5.6.2.1. Nursing staff experience of being allowed to establish goals by decision-making in ethical dilemmas
		5.6.2.2. Nursing staff experience of being encouraged in team-working and active participation when they make decisions in ethical dilemmas
		5.6.2.3. Nursing staff experience of sharing decision-making and problem-solving duties in ethical dilemmas
		5.6.2.4. Nursing staff experience of being recognised by head nurse through inputs and achievements when they make decisions in ethical dilemmas
5.7. Paternalistic leadership: affiliate (particular)	5.7.1. Head nurse's level	5.7.1.1. Head nurse's recognised contributions of individual nursing staff in decision-making within dilemmas
		5.7.1.2. Head nurse's building of relationships with nursing staff through decision-making in ethical dilemmas
		5.7.1.3. Head nurse's provision of positive feedback to nursing staff immediately after they made decisions in ethical dilemmas
		5.7.1.4. Head nurse's building of a sense of nursing staff belonging to a team when s/he makes decisions in ethical dilemmas
	5.7.2. Nursing staff level	5.7.2.1. Nursing staff experience of being empowered by the head nurse to participate in decision-making in ethical dilemmas despite the stressful situation
		5.7.2.2. Nursing staff experience of being encouraged by head nurse for self-motivation to master the situational leadership
		5.7.2.3. Nursing staff reflection on their personal behaviour's impact on the work environment through decision-making in ethical dilemmas
		5.7.2.4. Nursing staff experience of avoiding dealing with under-performing staff when they make decisions in ethical dilemmas
5.8. Thought leadership: sustainable	5.8.1. Head nurse's level	5.8.1.1. Head nurse's capability to engage the nursing staff intellectually, socially and emotionally in decision-making in ethical dilemmas
		5.8.1.2. Head nurse's emphasising the dialogue and shared decision-making in ethical dilemmas
		5.8.1.3. Head nurse's capability to build the educational environment through promotion of good ideas when s/he makes decisions in ethical dilemmas
		5.8.1.4. Head nurse's capability to implement good practice through shared learning and development when s/he makes decisions in ethical dilemmas
	5.8.2. Nursing staff level	5.8.2.1. Nursing staff experience of being encouraged by the head nurse to maintain the tradition of being human-centred when making decisions in ethical dilemmas
		5.8.2.2. Nursing staff experience of distribution of leadership throughout the staff on the ward when decisions are made in ethical dilemmas

Continuation of **Table 1**

Leadership characteristics (styles)	Criteria	Indicators
		5.8.2.3. Nursing staff experience of being responsible in decision-making in ethical dilemmas in that one's actions affect the environment on the ward
		5.8.2.4. Nursing staff recognising and being able to cultivate many kinds of excellence in practising learning through practice when they make decisions in ethical dilemmas
5.9. Thought leadership: authoritative (expert)	5.9.1. Head nurse's level	5.9.1.1. Head nurse's capability to align the relevant resources for implementing a vision regarding decision-making in ethical dilemmas
		5.9.1.2. Head nurse's capability to clearly articulate paths of success regarding decision-making in ethical dilemmas
		5.9.1.3. Head nurse's capability to mobilise the nursing staff towards a vision in decision-making in ethical dilemmas
		5.9.1.4. Head nurse's experience of being an authority to employees by initiating tasks when s/he makes decisions in ethical dilemmas
	5.9.2. Nursing staff level	5.9.2.1. Nursing staff acting under clearly articulated vision by the head nurse regarding the decision-making in ethical dilemmas
		5.9.2.2. Nursing staff acting as competent experts by performing relevant steps for success in decision-making in ethical dilemmas
		5.9.2.3. Nursing staff acting under advised specified roles by the head nurse in decision-making in ethical dilemmas
		5.9.2.4. Nursing staff experience of being allowed by the head nurse to figure out the best way to accomplish their goals regarding decision-making in ethical dilemmas
5.10. Thought leadership: transformational	5.10.1. Head nurse's level	5.10.1.1. Head nurse's capability to get the nursing staff to want change, to improve and to be led in decision-making in ethical dilemmas
		5.10.1.2. Head nurse's capability to implement the individual considerations through coaching and advising the nursing staff in decision-making in ethical dilemmas
		5.10.1.3. Head nurse's capability to empower the nursing staff to do the best for organisation in decision-making in ethical dilemmas
		5.10.1.4. Head nurse's capability to develop a spirit of cooperation through listening all viewpoints of nursing staff regarding decision-making in ethical dilemmas
	5.10.2. Nursing staff level	5.10.2.1.Nursing staff experience of acting as change agents by setting an example of how to initiate and implement change through decision-making in ethical dilemmas
		5.10.2.2.Nursing staff experience of implementing high values by acting through decision-making in ethical dilemmas
		5.10.2.3. Nursing staff experience of being inspirationally motivated by the head nurse regarding their commitment to organisational vision through decision-making in ethical dilemmas
		5.10.2.4. Nursing staff experience of being intellectually stimulated by the head nurse to find out innovations through decision-making in ethical dilemmas

Continuation of **Table 1**

Leadership characteristics (styles)	Criteria	Indicators
SECTION 4: CONSEQUENCES		
Dimension 6: complex consequences of the applied leadership styles when head nurse makes decisions in ethical dilemmas		
Consequences	Criteria	Indicators
6.1. Professional consequence	6.1.1. Head nurse's experienced increase of professional authority	6.1.1.1. Head nurse's experienced respect and recognition of the staff on the ward
		6.1.1.2. Head nurse's experienced respect and recognition of administration of the organisation
		6.1.1.3. Head nurse's experienced respect and recognition of colleagues from other units / wards
	6.1.2. Head nurse's experienced performance of overlapped roles	6.1.2.1. Head nurse's experienced overlapping between personal and professional roles
		6.1.2.2. Head nurse's experienced overlapping between professional and administrative roles
		6.1.2.3. Head nurse's experienced overlapping between personal and administrative roles
		6.1.2.4. Head nurse's experienced overlapped responsibilities between various professionals
	6.1.3. Head nurse's experienced professional satisfaction	6.1.3.1. Nursing staff experienced satisfaction of social needs
		6.1.3.2. Nursing staff experienced satisfaction of physiological needs
		6.1.3.3. Nursing staff experienced satisfaction of spiritual needs
		6.1.3.4. Nursing staff experienced satisfaction of psychological needs
		6.1.3.5. Head nurse's experienced satisfaction of social needs
		6.1.3.6. Head nurse's experienced satisfaction of physiological needs
		6.1.3.7. Head nurse's experienced satisfaction of spiritual needs
		6.1.3.8. Head nurse's experienced satisfaction of psychological needs
		6.1.3.9. Head nurse's experience the organisational needs are satisfied
6.2. Learning consequence	6.2.1. Head nurse's improved learning competence	6.2.1.1. Head nurse's improved competencies of team-working
		6.2.1.2.Head nurse's improved psycho-social competencies
		6.2.1.3. Head nurse's improved management and administration competencies
		6.2.1.4. Head nurse's improved educational competencies
		6.2.1.5. Head nurse's applied self-evaluation of gaps in professional competence
		6.2.1.6. Head nurse's applied self-evaluation of gaps in managerial and administrative competence
		6.2.1.7. Created learning environment atmosphere on the ward
6.3. Administrative consequence	6.3.1. Head nurse's improved administrative competence	6.3.1.1. Head nurse's experience of implemented mission and aims of organisation
		6.3.1.2. Head nurse's experience of created effective system of nursing staff competence development
		6.3.1.3. Head nurse's experience of creating effective strategy of finance allocation on the ward
		6.3.1.4. Development of effective information and communication system by the head nurse on the ward
		6.3.1.5. Establishment of team-working culture by the head nurse on the ward

Continuation of **Table 1**

Consequences	Criteria	Indicators
		6.3.1.6. Implemented the leadership by the head nurse among nursing staff on the ward
	6.3.2. Satisfied needs and expectations	6.3.2.1. Experienced head nurse's opportunities for integrated personal, professional and administrative development
		6.3.2.2. Experienced head nurse's personal autonomy at work
		6.3.2.3. Experienced head nurse's administrative autonomy at work
		6.3.2.4. Experienced head nurse's courage at work concerning effective changes
		6.3.2.5. Satisfied organisational expectations
		6.3.2.6. Satisfied expectations of nursing staff on the ward
		6.3.2.7. Satisfied expectations of administration of organisation
		6.3.2.8. Satisfied head nurse's personal expectations
6.4. Ethical consequence	6.4.1. Improved head nurse's ethical competence	6.4.1.1. Head nurse's experienced satisfaction of being ethical in decision-making
		6.4.1.2. Head nurse's capability to integrate the choice under current dominant ideology of organisation
		6.4.1.3. Head nurse's capability to empower the staff through their participation in decision-making in ethical dilemmas
	6.4.2. Head nurse's successful conflict management	6.4.2.1. Stimulated positive viewpoints of society regarding competence of health care professionals
		6.4.2.2. Stimulated positive viewpoints of society regarding professional authority of heath care professionals
		6.4.2.3. Resolved conflicts among different health care professionals
	6.4.3. Head nurse's experienced ethically controversial consequences	6.4.3.1. Experienced confusion regarding nurse's profession through satisfaction of only society expectations
		6.4.3.2. Experienced confusion regarding nurse's profession through satisfaction of only organisational expectations
		6.4.3.3. Experienced confusion by following only the organisational values
		6.4.3.4. Experienced confusion by striving not to break the organisational climate
		6.4.3.5. Experienced confusion by focusing only on professional values
		6.4.3.6. Experienced confusion by following only the administrative rules and responsibilities
	6.4.4. Head nurse's experienced spiritual (internal) suffering	6.4.4.1. Head nurses experienced suffering of a defeat because of gap between organisational and personal values
		6.4.4.2. Head nurses experienced suffering of a defeat because of gap between organisational and professional values

Instrument applied in Phase III

PART 1 - BACKGROUND

DEMOGRAPHIC FACTORS

1. Your age _____

2. Your gender (tick ✕ in one box)

Female	☐	Male	☐

3. What is your educational level and the name of study programme (tick ✕ in adequate box)

	University	College	High medical school
Nursing	☐	☐	☐
Medicine	☐	☐	☐
Midwifery	☐	☐	☐
Public health	☐	☐	☐
Epidemiology	☐	☐	☐
Other ……	☐	☐	☐

4. How many years have you worked in this health care organisation in administrative position?

Years (write, please) ……..if under …… months

5. What is the level of health care organisation where you work? (tick ✕ in one box)

Primary	☐
Secondary	☐
Tertiary	☐

6. What is the status of health care organisation where you work? (tick ✕ in one box)

Public	☐
Private	☐
Mixed	☐

7. What is the health care specialism of your ward? (tick ✕ in one box)

General practice (therapy)	☐
Surgery	☐
Pediatrics	☐
Psychiatry (mental health)	☐
Intensive care	☐
Palliative care	☐
Midwifery	☐
Gynaecology	☐
Oncology	☐
Community (family)	☐
Operating-room	☐
Anaesthesiology	☐
Other (write, please) ……	☐

PART 2 – REASONS

NURSE-RELATED FACTORS

8. What kind of nurse-related factors influence the ethical dilemma situations on the ward? (tick ✕ in every line in one box)

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
Nurses' personal attributes	☐	☐	☐	☐	☐
Nurses' communication with patients	☐	☐	☐	☐	☐
Nurses' communication with patients' relatives	☐	☐	☐	☐	☐
Nurses' communication with colleagues nurses	☐	☐	☐	☐	☐
Nurses' social competence	☐	☐	☐	☐	☐
Nurses' professional competence	☐	☐	☐	☐	☐
Nurses' management competence	☐	☐	☐	☐	☐
Salary of nurses	☐	☐	☐	☐	☐
Workload of nurses	☐	☐	☐	☐	☐
Responsibilities of nurses	☐	☐	☐	☐	☐

THE WARD-RELATED FACTORS

9. What is the incidence of ethical dilemmas you meet on the ward? (tick ✕ only in one line in one box)

Several times per day	☐
Once per day	☐
Several times per week	☐
Once per week	☐
Several times per month	☐
Once per month	☐
More seldom	☐

10. What are your experienced challenges of ethical dilemmas on the ward? (tick ✕ in every line in one box)

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
Striving to satisfy needs of the ward	☐	☐	☐	☐	☐
Striving to satisfy needs of patients	☐	☐	☐	☐	☐
Striving to satisfy needs of nurses	☐	☐	☐	☐	☐
Conflict management between nurses and patients	☐	☐	☐	☐	☐
Conflict management between nurses and patient relatives	☐	☐	☐	☐	☐
Conflict management between nurses	☐	☐	☐	☐	☐
Open discussions with nurses	☐	☐	☐	☐	☐
Team working of nurses	☐	☐	☐	☐	☐

11. From whom did you experience pressure regarding the ethical dilemmas on the ward?

	Patient	Patient relatives	Nurses	Head physician on the ward	Organisation management team
Social pressure	☐	☐	☐	☐	☐
Moral pressure	☐	☐	☐	☐	☐
Psychological pressure	☐	☐	☐	☐	☐
Administrative pressure	☐	☐	☐	☐	☐
Financial pressure	☐	☐	☐	☐	☐

THE HEAD NURSE-RELATED FACTORS (tick ✕ in every line in one box)

12. How did the experienced ethical dilemmas influence you?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
Learning from experience	☐	☐	☐	☐	☐
Feeling more competent	☐	☐	☐	☐	☐
Experiencing stress	☐	☐	☐	☐	☐
Understanding constraints	☐	☐	☐	☐	☐
Learning to solve problems	☐	☐	☐	☐	☐
Learning to predict ethical dilemmas	☐	☐	☐	☐	☐

13. What kind of head nurse-related factors influence the ethical dilemmas on the ward?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
My personal attributes	☐	☐	☐	☐	☐
My communication with patients	☐	☐	☐	☐	☐
My communication with patient's relatives	☐	☐	☐	☐	☐
My communication with nurses	☐	☐	☐	☐	☐
My social competence	☐	☐	☐	☐	☐
My professional competence	☐	☐	☐	☐	☐
My management skills	☐	☐	☐	☐	☐
My salary	☐	☐	☐	☐	☐
My workload	☐	☐	☐	☐	☐
My responsibilities on the ward	☐	☐	☐	☐	☐

14. How is your professional authority treated regarding decision-making in ethical dilemmas?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
Nurses respect and recognise me as professional	□	□	□	□	□
Hospital management team respects and recognises me as professional	□	□	□	□	□
Nurses respect and recognise me as the head nurse on the ward	□	□	□	□	□

15. Do you participate in teamwork with nurses, when you make decisions in ethical dilemmas?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
The teamwork on the ward is initiated by any nurse	□	□	□	□	□
In a teamwork I am the only leader	□	□	□	□	□
The team discussions on ethical dilemmas are initiated by any nurse	□	□	□	□	□
The team meetings are initiated by any nurse regarding ethical dilemmas	□	□	□	□	□
I am only a participant in team meetings with nurses	□	□	□	□	□

16. How important is reflection, when you make decisions in ethical dilemmas?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I reflect the work of nurses by giving them feedback	□	□	□	□	□
I reflect personal work and discuss it with nurses	□	□	□	□	□
I reflect decisions of hospital management team and discuss it with nurses	□	□	□	□	□
I reflect decisions of hospital management team and give them feedback	□	□	□	□	□

17. How it is possible for you to develop organisational competence?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
The ward supports participation in scientific events (conferences, workshops, etc.)	□	□	□	□	□
The ward supports my participation in professional courses	□	□	□	□	□
I implement the 'good practice' examples on the ward as a resource for my personal competence development	□	□	□	□	□
I implement the 'good practice' examples on the ward as a resource for nurses' competence development	□	□	□	□	□

18. Did you experience satisfaction after making decisions in dilemmas?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I experience psychological comfort at work	□	□	□	□	□
I experience professional autonomy at work	□	□	□	□	□
I experience a balance between workload and professional responsibilities	□	□	□	□	□
I experience myself as a team member on the ward	□	□	□	□	□
I apply my competence in this working position in full value	□	□	□	□	□
I implement professional courage through my administrative position	□	□	□	□	□

19. Did you experience satisfaction after making decisions in dilemmas?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I experience psychological comfort at work	□	□	□	□	□
I experience professional autonomy at work	□	□	□	□	□
I experience a balance between workload and professional responsibilities	□	□	□	□	□
I experience myself as a team member on the ward	□	□	□	□	□
I apply my competence in this working position in full value	□	□	□	□	□
I implement professional courage through my administrative position	□	□	□	□	□

ORGANISATION-RELATED FACTORS (tick ✕ in every line in one box)

20. What kind of values, priorities and resource allocation possibilities are there?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
Financial resource allocation on the ward	□	□	□	□	□
Material resource allocation on the ward	□	□	□	□	□
Organisational respect to nursing	□	□	□	□	□
Organisational priorities of nursing	□	□	□	□	□
Organisational priorities of patients' needs	□	□	□	□	□
Organisational priorities of nurses' needs	□	□	□	□	□
Organisational values	□	□	□	□	□
Organisational hierarchy	□	□	□	□	□

21. Are the ethics of organisation valued where you work when you make decisions in ethical dilemmas?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
Nurses know and apply the service-related ethics on the ward	□	□	□	□	□
Nurses know and accept administration-related ethics on the ward	□	□	□	□	□
Nurses know and apply the staff-related ethics on the ward	□	□	□	□	□
Nurses know and apply the profession-related ethics on the ward	□	□	□	□	□
I monitor the application of organisational ethical principles on the ward among nurses	□	□	□	□	□

PART 3 – ACTIONS

PRIMITIVE LEADERSHIP TYPE (tick ✕ in every line in one box)

Implementation of autocratic leadership style

22. Are you familiar with the relevant nuances that are presented in statements regarding decision-making in ethical dilemmas at work?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I distrust nurses in decision-making in ethical dilemmas	□	□	□	□	□
I rely on threats and punishment to influence nurses in decision-making in ethical dilemmas	□	□	□	□	□
I am focused only on decision-making in ethical dilemmas, despite nurses' tension or fear	□	□	□	□	□
I ask other wards to help to coordinate the decision-making in ethical dilemmas on the ward	□	□	□	□	□

Implementation of laissez-faire leadership style (tick ✕ in every line in one box)

23. Are you familiar with the relevant nuances that are presented in statements regarding decision-making in ethical dilemmas at work?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I understand personal responsibilities and do not hope that nurses can cover me in decision-making in ethical dilemmas	□	□	□	□	□
I provide regular feedback to let nurses know how well they are doing in decision-making in ethical dilemmas	□	□	□	□	□
I trust nurses' competence in decision-making in ethical dilemmas	□	□	□	□	□
I permit nurses as much freedom as possible in decision-making in ethical dilemmas	□	□	□	□	□

Implementation of bureaucratic leadership style

24. Are you familiar with the relevant nuances that are presented in statements regarding decision-making in ethical dilemmas at work?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I avoid the leadership in decision-making in ethical dilemmas	□	□	□	□	□
I act autonomously according to my formal work position by avoiding collaboration with nurses in decision-making in ethical dilemmas	□	□	□	□	□
I avoid to break the standardised procedures and work habits of nurses in making-decisions in ethical dilemmas	□	□	□	□	□
I transfer responsibility to a higher administrative level on the ward in decision-making in ethical dilemmas	□	□	□	□	□

PATERNALISTIC LEADERSHIP TYPE

Implementation of coaching (supervisory) leadership style

25. Are you familiar with the relevant nuances that are presented in statements regarding decision-making in ethical dilemmas at work?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I initiate nurses self-reflections on their strengths and weaknesses in decision-making in ethical dilemmas	□	□	□	□	□
I give feedback on nurses' competence in decision-making in ethical dilemmas	□	□	□	□	□
I encourage nurses' development through personal empathy and self-awareness in decision-making in ethical dilemmas	□	□	□	□	□
I delegate and give to nurses the challenging assignments in decision-making in ethical dilemmas	□	□	□	□	□

Implementation of charismatic leadership style

26. Are you familiar with the relevant nuances that are presented in statements regarding decision-making in ethical dilemmas at work?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I evaluate the gap between the ward's and nurses' needs in decision-making in ethical dilemmas	□	□	□	□	□
I apply personal charm to lead through personal persistence and sacrifice in decision-making in ethical dilemmas	□	□	□	□	□

Continuation of 26th question

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I create a vision of a better future state regarding decision-making in ethical dilemmas	□	□	□	□	□
I inspire nurses to obtain extraordinary results in decision-making in ethical dilemmas	□	□	□	□	□

MODERN LEADERSHIP TYPE

Implementation of democratic (participative) leadership style

27. Are you familiar with the relevant nuances that are presented in statements regarding decision-making in ethical dilemmas at work?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I develop plans to help nurses to evaluate their actions in decision-making in ethical dilemmas	□	□	□	□	□
I encourage nurses to be a part of decision-making in ethical dilemmas	□	□	□	□	□
I encourage nurses to grow in decision-making in ethical dilemmas	□	□	□	□	□
I inspire cooperation and high morale among nurses through decision-making in ethical dilemmas	□	□	□	□	□

Implementation of affiliate (particular) leadership style (tick ✕ in every line in one box)

28. Are you familiar with the relevant nuances that are presented in statements regarding decision-making in ethical dilemmas at work?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I recognise the contributions of individual nurse in a certain situations regarding decision-making in ethical dilemmas	□	□	□	□	□
I build relationships with nurses in decision-making in ethical dilemmas	□	□	□	□	□
I provide positive feedback to nurses after they make decisions in ethical dilemmas	□	□	□	□	□
I build a sense of belonging to a team among nurses in decision-making in ethical dilemmas	□	□	□	□	□

THOUGHT LEADERSHIP TYPE

Implementation of sustainable leadership style

29. Are you familiar with the relevant nuances that are presented in statements regarding decision-making in ethical dilemmas at work?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I engage nurses intellectually, socially and emotionally in decision-making in ethical dilemmas	□	□	□	□	□
I emphasise dialogue and shared-decision-making among nurses in ethical dilemmas	□	□	□	□	□
I build an educational environment through promotion of good ideas among nurses in decision-making in ethical dilemmas	□	□	□	□	□
I implement good practice through shared learning and development among nurses in decision-making in ethical dilemmas	□	□	□	□	□

Implementation of authoritative (expert) leadership style

30. Are you familiar with the relevant nuances that are presented in statements regarding decision-making in ethical dilemmas at work?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I align the relevant resources for implementing a vision among nurses regarding decision-making in ethical dilemmas	□	□	□	□	□
I clearly articulate paths of success to nurses regarding decision-making in ethical dilemmas	□	□	□	□	□
I mobilise the nurses towards a vision in decision-making in ethical dilemmas	□	□	□	□	□
I am an authority to nurses by initiating tasks in decision-making in ethical dilemmas	□	□	□	□	□

Implementation of transformational leadership style

31. Are you familiar with the relevant nuances that are presented in statements regarding decision-making in ethical dilemmas at work?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I get nurses to want change, to improve and to lead in decision-making in ethical dilemmas	□	□	□	□	□
I implement individual considerations through coaching and advising nurses in decision-making in ethical dilemmas	□	□	□	□	□
I empower nurses to do the best for the ward regarding decision-making in ethical dilemmas	□	□	□	□	□
I develop a spirit of cooperation through listening to all viewpoints of nurses regarding decision-making in ethical dilemmas	□	□	□	□	□

PART 4 – CONSEQUENCES (OF APPLIED LEADERSHIP STYLE) (tick ✕ in every line in one box)

32. How do you experience professional authority after you make successful decisions in ethical dilemmas?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
Increases the nurses' respect for me on the ward	□	□	□	□	□
Increases the head physicians respect for me on the ward	□	□	□	□	□
Increases the hospital management team respect for me	□	□	□	□	□
Increases personal dignity	□	□	□	□	□

33. What kind of needs satisfaction influences improvement of your leadership competence regarding decision-making in ethical dilemmas?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
Satisfaction of nurses' needs	□	□	□	□	□
Satisfaction of personal needs	□	□	□	□	□
Satisfaction of the ward needs	□	□	□	□	□

34. What kind of competencies do you improve through decision-making in ethical dilemmas?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I improve teamwork competencies	□	□	□	□	□
I improve social competencies	□	□	□	□	□
I improve management competencies	□	□	□	□	□
I improve administrative competencies	□	□	□	□	□

Continuation of 34th question

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I improve educational competencies	□	□	□	□	□
I improve professional competencies	□	□	□	□	□
I improve leadership competencies	□	□	□	□	□
I improve ethical competencies	□	□	□	□	□

35. How did you improve management competence regarding decision-making in ethical dilemmas?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I established an effective system of nurses' competence development	□	□	□	□	□
I created an effective strategy of finance allocation on the ward	□	□	□	□	□
I developed an effective information and communication system on the ward	□	□	□	□	□
I established team-working on the ward	□	□	□	□	□
I encouraged leadership among nurses on the ward	□	□	□	□	□

36. What are your experiences regarding ethically controversial consequences in making decisions in ethical dilemmas?

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I experience confusion by satisfying only patients' expectations	□	□	□	□	□
I experience confusion by satisfying only patients' relatives' expectations	□	□	□	□	□
I experience confusion by following only professional expectations	□	□	□	□	□
I experience confusion by following only administrative rules and responsibilities	□	□	□	□	□
I suffer defeat concerning the gap between organisational and professional values	□	□	□	□	□

THANK YOU!

Instruction for research participants

Dear head nurse,

We kindly invite you to participate in research with the purpose to study the issues related to head nurses' decision-making when managing ethical dilemmas. The concept 'ethical dilemma' in this research is used to refer to circumstances when a choice has to be made between two equally unsatisfactory alternatives. We kindly ask you to reflect on situations in which you experienced an ethical dilemma with the focus on issues, and your leading in the decision-making process within it.

We hope that the following questions will be useful for your reflection:

- In what situations did you experience ethical dilemmas where you made decisions?
- What were reasons for making particular decisions, what actions did you take when you made decisions, and what were the consequences of your decision-making in ethical dilemmas?

You are not asked to reflect exactly on the ethical dilemma situation regarding the organisational context within your work.

You are not asked to discuss sensitive topics regarding your superiors and the wider administrative systems and organisational hierarchies.

You are free to choose the situation or case from your experience in a health care institution and to narrate it in a written format, and to send it to the following e-mail: v.zydziunaite@kic.vdu.lt

Your participation in this research is voluntary.

You have the right to withdraw at any time. All your responses (narratives) will be kept confidential. Any report of the data collected will be in summary form, without identifying individuals.

Without your assistance, much of the research not be possible.

We hope that your participation will be a mutually beneficial experience.

Thank you.

The Research Team.

*Routine questions about participation in the research can be directed to the research leader at the following e-mail: v.zydziunaite@kic.vdu.lt

**Any ethical questions should be addressed to the representative of the Ethical Committee at Vytautas Magnus University by the following e-mail: dek@smf.vdu.lt

Information for survey participants

Dear Research Participant,

You are kindly invited to participate in the research, which aims to disclose ethical dilemmas regarding decision-making among head nurses on the wards. The research is focused on leadership by head nurses within health care organisations at primary, secondary and tertiary health care levels.

The relevant quantitative research is being performed by a research team, which consists of PhD student V. Zydziunaite and other members: Prof. T. Suominen, Prof. P. Åstedt-Kurki and Assoc. prof. D. Lepaite.

This PhD research is being undertaken at the Department of Nursing Science, University of Tampere, Finland.

This research is anonymous and confidential which means that you are not asked to mention your personal name and surname or the title of the organisation, where you work. Access to data is possible only by me as the PhD student and the supervisors mentioned above.

The summarised quantitative research results will be presented in articles, related to the PhD dissertation as well as in a summary of the PhD dissertation.

The results of the research will be published in scientific journals (2011-2014) and in the doctoral dissertation (2015).

Your opinions and attitudes are very important for the validity and reliability of research results.

****

The questionnaire consists of 36 closed-ended questions.

The instructions for filling the answers are given with every question.

Filling in the questionnaire will take 30-40 minutes of your time.

Thank you for your time.

The Research Team

E-mail for contact: vilma.vilma@ymail.com

Leadership styles in decision-making when a head nurse manages ethical dilemmas

Table 1. One-way analysis of variance: head nurse's age and application of leadership styles in ethical dilemmas (n = 278) (the preselected significance level is P<0.05)

Leadership styles	Levene's statistics	Sig.		Sum of squares	df	Mean square	F	Sig.
Autocratic	0.968	0.426	Between groups	25.053	4	3.878	0.652	0.626
			Within groups	2624.500	273	6.263		
			Total	2649.554	277			
Laissez-faire	1.648	0.163	Between groups	14.250	4	9.614	0.584	
			Within groups	1666.602	273	3.563		
			Total	1680.853	277			
Bureaucratic	2.020	0.093	Between groups	80.422	4	6.105	2.083	0.083
			Within groups	2635.492	273	20.106		
			Total	2715.914	277			
Coaching	0.485	0.747	Between groups	63.264	4	15.816	2.329	0.056
			Within groups	1853.876	273	6.791		
			Total	1917.140	277			
Charismatic	1.119	0.348	Between groups	41.104	4	10.276	1.294	0.273
			Within groups	2168.220	273	7.942		
			Total	2209.324	277			
Democratic	0.934	0.445	Between groups	71.024	4	17.756	2.308	0.058
			Within groups	2100.199	273	7.693		
			Total	2171.223	277			
Affiliate	2.284	0.061	Between groups	43.305	4	10.826	1.201	0.310
			Within groups	2459.875	273	9.011		
			Total	2503.180	277			
Sustainable	1.873	0.116	Between groups	24.101	4	6.025	0.752	0.557
			Within groups	2185.974	273	8.007		
			Total	2210.076	277			
Authoritative	1.139	0.339	Between groups	15.119	4	3.780	0.433	0.785
			Within groups	2381.432	273	8.723		
			Total	2396.550	277			
Transformational	2.955	0.021	Between groups	7.887	4	1.972	0.258	0.905
			Within groups	2089.983	273	7.656		
			Total	2097.871	277			

Table 2. Descriptive statistics: the head nurses' age and leadership styles in ethical dilemmas (n=278)

Leadership styles	20-30 years old		31-40 years old		41-50 years old		51-60 years old		Over 60 years old	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Autocratic	3.63	3.54	3.03	3.31	3.15	2.85	3.05	3.33	2.97	2.45
Laissez-faire	4.13	0.71	3.81	2.35	3.85	2.71	3.77	2.39	3.66	1.54
Bureaucratic	3.88	2.12	2.96	3.48	3.20	2.84	3.21	3.23	3.33	2.24
Coaching	4.0	1.41	3.99	2.18	3.94	2.35	3.74	3.31	3.61	2.66
Charismatic	3.75	1.41	3.69	2.33	3.64	2.87	3.59	3.16	3.27	3.09
Democratic	4.13	0.71	4.24	2.01	4.06	3.06	3.92	3.1	3.92	2.39
Affiliate	4.13	0.71	4.15	2.74	4.03	2.9	3.92	3.39	3.83	3.18
Sustainable	4.13	0.71	4.06	2.59	3.96	2.79	3.93	3.0	3.75	3.46
Authoritative	3.88	2.12	3.83	2.65	3.85	2.87	3.81	3.3	3.60	3.32
Transformational	4.0	2.41	4.01	2.29	4.03	2.87	3.94	3.16	3.91	2.31

Table 3. One-way analysis of variance: head nurse's education level and application of leadership styles in ethical dilemmas (n = 278)

Leadership styles	Levene's statistics	Sig.		Sum of squares	df	Mean square	F	Sig.
Autocratic	0.407	0.419	Between groups	22.735	3	7.578	0.785	0.503
			Within groups	2616.152	271	9.654		
			Total	2638.887	274			
Laissez-faire	2.466	0.114	Between groups	19.329	3	6.443	1.052	0.370
			Within groups	1659.777	271	6.125		
			Total	1679.105	274			
Bureaucratic	0.157	0.900	Between groups	58.537	3	19.512	1.991	0.116
			Within groups	2656.372	271	9.802		
			Total	2714.909	274			
Coaching	0.639	0.182	Between groups	51.115	3	17.038	2.475	0.062
			Within groups	1865.372	271	6.883		
			Total	1916.487	274			
Charismatic	0.268	0.213	Between groups	14.358	3	4.786	0.593	0.620
			Within groups	2187.911	271	8.073		
			Total	2202.269	274			
Democratic	1.880	0.361	Between groups	26.647	3	8.882	1.123	0.340
			Within groups	2144.349	271	7.913		
			Total	2170.996	274			
Affiliate	0.761	0.449	Between groups	33.211	3	11.070	1.215	0.305
			Within groups	2469.939	271	9.114		
			Total	2503.149	274			
Sustainable	0.673	0.548	Between groups	23.769	3	7.923	0.982	0.402
			Within groups	2186.253	271	8.067		
			Total	2210.022	274			

Continuation of **Table 3**

Leadership styles	Levene's statistics	Sig.		Sum of squares	df	Mean square	F	Sig.
Authoritative	1.477	0.045	Between groups	16.816	3	5.605	0.638	0.591
			Within groups	2379.489	271	8.780		
			Total	2396.305	274			
Transformational	0.522	0.163	Between groups	38.871	3	12.957	1.708	0.166
			Within groups	2056.096	271	7.587		
			Total	2094.967	274			

Table 4. Descriptive statistics: head nurses' education level of and leadership styles in ethical dilemmas (n=278)

Leadership styles	Bachelor level		Master level		College level		Medical school	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Autocratic	3.13	2.86	2.89	2.94	3.05	3.3	3.13	3.2
Laissez-faire	3.9	2.46	3.77	2.96	3.83	2.14	3.74	2.53
Bureaucratic	3.25	3.0	2.95	3.18	3.0	3.41	3.21	3.04
Coaching	4.0	2.28	3.92	2.86	3.95	2.58	3.75	2.81
Charismatic	3.68	2.79	3.47	3.51	3.63	2.53	3.6	2.86
Democratic	4.1	2.92	3.96	3.31	4.19	2.39	4.01	2.82
Affiliate	4.11	2.75	4.05	3.29	4.1	2.97	3.92	3.15
Sustainable	3.99	2.79	3.97	2.82	4.07	2.77	3.89	2.92
Authoritative	3.90	2.96	3.69	3.69	3.8	3.16	3.81	2.62
Transformational	4.0	2.66	3.99	3.02	4.15	2.51	3.91	2.88

Table 5. One-way analysis of variance: head nurse's work experience and application of leadership styles in ethical dilemmas (n = 278)

Leadership styles	Levene's statistics	Sig.		Sum of squares	df	Mean square	F	Sig.
Autocratic	0.830	0.166	Between groups	197.905	7	28.272	3.114	0.004
			Within groups	2451.649	270	9.080		
			Total	2649.554	277			
Laissez-faire	4.098	0.118	Between groups	102.469	7	14.638	2.504	0.017
			Within groups	1578.384	270	5.846		
			Total	1680.853	277			
Bureaucratic	1.473	0.048	Between groups	372.588	7	53.227	6.133	0.000
			Within groups	2343.326	270	8.697		
			Total	2715.914	277			
Coaching	0.271	0.027	Between groups	126.314	7	18.045	2.721	0.010
			Within groups	1790.826	270	6.633		
			Total	1917.140	277			
Charismatic	0.824	0.002	Between groups	303.011	7	43.287	6.131	0.000
			Within groups	1906.313	270	7.060		
			Total	2209.324	277			

Continuation of **Table 5**

Leadership styles	Levene's statistics	Sig.		Sum of squares	df	Mean square	F	Sig.
Democratic	0.577	0.000	Between groups	175.188	7	25.027	3.385	0.002
			Within groups	1996.035	270	7.393		
			Total	2171.223	277			
Affiliate	3.283	0.000	Between groups	175.903	7	25.129	2.915	0.06
			Within groups	2327.277	270	8.620		
			Total	2503.180	277			
Sustainable	2.322	0.010	Between groups	307.552	7	43.936	6.235	0.000
			Within groups	1902.523	270	7.046		
			Total	2210.076	277			
Authoritative	2.381	0.001	Between groups	245.100	7	35.014	4.394	0.000
			Within groups	2151.450	270	7.968		
			Total	2396.550	277			
Transformational	1.912	0.007	Between groups	183.806	7	7.089	3.704	0.001
			Within groups	1914.064	270	26.258		
			Total	2097.871	277			

Table 6. Descriptive statistics: head nurse's work experience and leadership styles in ethical dilemmas (n=278)

Autocratic	Up to 1 year		1-3 years		3-5 years		6-10 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	2.25	4.0	2.98	3.73	3.04	2.96	3.13	44
	11-15 years		16-20 years		21-25 years		26-30 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	2.96	49	3.41	2.17	3.16	2.46	3.14	3.04
Laissez – faire	Up to 1 year		1-3 years		3-5 years		6-10 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	3.85	2.55	3.64	2.75	3.95	2.23	3.87	2.31
	11-15 years		16-20 years		21-25 years		26-30 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	3.62	2.81	3.91	2.27	4.05	1.78	3.68	2.14
Bureaucratic	Up to 1 year		1-3 years		3-5 years		6-10 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	2.25	4.03	3.96	3.51	3.06	2.87	3.29	2.82
	11-15 years		16-20 years		21-25 years		26-30 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	2.89	3.27	3.38	2.1	3.58	2.76	3.48	2.2
Coaching	Up to 1 year		1-3 years		3-5 years		6-10 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	3.95	2.35	3.82	2.64	3.88	2.59	3.98	2.39
	11-15 years		16-20 years		21-25 years		26-30 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	3.62	3.22	4.14	1.77	4.07	2.23	3.75	2.81
Charismatic	Up to 1 year		1-3 years		3-5 years		6-10 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	3.13	2.22	3.52	2.22	3.76	2.41	3.72	2.95
	11-15 years		16-20 years		21-25 years		26-30 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	3.18	3.08	3.91	1.96	3.89	3.1	3.71	3.08

Continuation of **Table 6**

Charismatic	Up to 1 year		1-3 years		3-5 years		6-10 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	3.13	2.22	3.52	2.22	3.76	2.41	3.72	2.95
	11-15 years		16-20 years		21-25 years		26-30 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	3.18	3.08	3.91	1.96	3.89	3.1	3.71	3.08
Democratic	Up to 1 year		1-3 years		3-5 years		6-10 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	4.05	3.01	4.19	2.21	4.17	2.29	4.03	2.65
	11-15 years		16-20 years		21-25 years		26-30 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	3.7	3.97	4.33	1.67	4.15	2.42	3.99	2.9
Affiliate	Up to 1 year		1-3 years		3-5 years		6-10 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	4.13	3.44	3.99	3.15	4.19	2.16	4.06	2.5
	11-15 years		16-20 years		21-25 years		26-30 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	3.7	3.75	4.28	2.01	4.14	2.74	3.79	3.88
Sustainable	Up to 1 year		1-3 years		3-5 years		6-10 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	4.05	3.26	4.08	2.24	4.12	2.71	3.92	2.49
	11-15 years		16-20 years		21-25 years		26-30 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	3.44	3.51	4.22	2.14	4.17	2.15	3.98	2.43
Authoritative	Up to 1 year		1-3 years		3-5 years		6-10 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	3.73	4.98	3.75	2.56	3.88	2.49	3.82	2.66
	11-15 years		16-20 years		21-25 years		26-30 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	3.42	3.51	4.14	2.12	4.16	2.66	3.82	2.6
Transformational	Up to 1 year		1-3 years		3-5 years		6-10 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	4.28	1.91	3.96	2.40	4.01	2.73	3.92	2.11
	11-15 years		16-20 years		21-25 years		26-30 years	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	3.68	3.58	4.3	1.82	4.26	2.24	3.91	3.43

Table 7. One-way analysis of variance: the ward specialism and application of leadership styles in ethical dilemmas (n = 278)

Leadership styles	Levene's statistics	Sig.		Sum of squares	df	Mean square	F	Sig.
Autocratic	2.589	0.27	Between groups	49.522	5	9.904	1.036	0.141
			Within groups	2600.032	272	9.559		
			Total	2649.554	277			
Laissez-faire	1.015	0.410	Between groups	16.616	5	3.523	0.576	0.150
			Within groups	1663.237	272	6.115		
			Total	1680.853	277			
Bureaucratic	1.926	0.910	Between groups	76.231	5	15.246	1.571	0.086
			Within groups	2639.683	272	9.705		
			Total	2715.914	277			

Continuation of **Table 7**

Leadership styles	Levene's statistics	Sig.		Sum of squares	df	Mean square	F	Sig.
Coaching	1.150	0.335	Between groups	49.934	5	8.787	1.276	0.274
			Within groups	1873.206	272	6.887		
			Total	1917.140	277			
Charismatic	1.710	0.133	Between groups	111.905	5	22.381	2.902	0.000
			Within groups	2097.418	272	7.711		
			Total	2209.324	277			
Democratic	2.824	0.170	Between groups	112.727	5	22.545	2.979	0.012
			Within groups	2058.496	272	7.568		
			Total	171.223	277			
Affiliate	0.343	0.238	Between groups	107.366	5	21.473	2.438	0.035
			Within groups	2395.814	272	8.808		
			Total	2503.180	277			
Sustainable	0.596	0.039	Between groups	98.331	5	19.666	2.533	0.029
			Within groups	2111.744	272	7.764		
			Total	2210.076	277			
Authoritative	0.338	0.048	Between groups	100.678	5	20.136	2.386	0.039
			Within groups	2295.872	272	8.441		
			Total	2396.550	277			
Transformational	0.896	0.409	Between groups	139.769	5	27.954	3.883	0.002
			Within groups	1958.102	272	7.199		
			Total	2097.871	277			

Table 8. Descriptive statistics: the ward specialism and application of leadership styles in ethical dilemmas

Leadership styles	General medical practice/ therapy		Surgery		Paediatrics	
	Mean	SD	Mean	SD	Mean	SD
Autocratic	3.23	2.79	3.1	3.39	2.86	3.03
	Psychiatry		Intensive medicine and care		Other	
	Mean	SD	Mean	SD	Mean	SD
	2.98	2.75	2.96	2.83	3.07	3.31
Laissez – faire	General medical practice/ therapy		Surgery		Paediatrics	
	Mean	SD	Mean	SD	Mean	SD
	3.86	2.49	3.86	2.79	3.78	3.4
	Psychiatry		Intensive medicine and care		Other	
	Mean	SD	Mean	SD	Mean	SD
	3.67	2.18	3.88	1.66	3.79	2.19

Continuation of **Table 8**

Bureaucratic	General medical practice/therapy		Surgery		Paediatrics	
	Mean	SD	Mean	SD	Mean	SD
	3.33	2.99	3.05	3.45	2.96	3.67
	Psychiatry		Intensive medicine and care		Other	
	Mean	SD	Mean	SD	Mean	SD
	2.99	2.74	3.27	2.7	3.14	3.05
Coaching	General medical practice/therapy		Surgery		Paediatrics	
	Mean	SD	Mean	SD	Mean	SD
	3.99	2.72	3.93	2.85	3.9	3.08
	Psychiatry		Intensive medicine and care		Other	
	Mean	SD	Mean	SD	Mean	SD
	3.69	2.31	3.99	2.14	3.82	2.46
Charismatic	General medical practice/therapy		Surgery		Paediatrics	
	Mean	SD	Mean	SD	Mean	SD
	3.84	2.85	3.69	2.68	3.5	3.03
	Psychiatry		Intensive medicine and care		Other	
	Mean	SD	Mean	SD	Mean	SD
	3.36	3.4	3.56	2.14	3.53	2.54
Democratic	General medical practice/therapy		Surgery		Paediatrics	
	Mean	SD	Mean	SD	Mean	SD
	4.18	2.45	4.02	3.23	4.14	3.36
	Psychiatry		Intensive medicine and care		Other	
	Mean	SD	Mean	SD	Mean	SD
	3.7	3.0	4.34	1.62	4.09	2.52
Affiliate	General medical practice/therapy		Surgery		Paediatrics	
	Mean	SD	Mean	SD	Mean	SD
	4.11	3.09	4.01	3.23	3.79	3.76
	Psychiatry		Intensive medicine and care		Other	
	Mean	SD	Mean	SD	Mean	SD
	3.71	3.09	4.28	2.29	4.10	2.49
Sustainable	General medical practice/therapy		Surgery		Paediatrics	
	Mean	SD	Mean	SD	Mean	SD
	4.11	2.48	3.97	3.03	3.71	3.92
	Psychiatry		Intensive medicine and care		Other	
	Mean	SD	Mean	SD	Mean	SD
	3.68	3.19	4.13	2.53	4.0	2.38
Authoritative	General medical practice/therapy		Surgery		Paediatrics	
	Mean	SD	Mean	SD	Mean	SD
	3.9	2.45	3.85	3.33	3.69	3.7
	Psychiatry		Intensive medicine and care		Other	
	Mean	SD	Mean	SD	Mean	SD
	3.45	3.29	3.94	3.35	3.9	2.43

Continuation of **Table 8**

Transformational	General medical practice/therapy		Surgery		Paediatrics	
	Mean	SD	Mean	SD	Mean	SD
	4.06	3.17	4.01	2.57	3.83	2.99
	Psychiatry		Intensive medicine and care		Other	
	Mean	SD	Mean	SD	Mean	SD
	3.59	2.84	4.31	1.99	4.08	2.26

Appendix 6

Reasons to apply particular leadership styles when a head nurse makes decisions in ethical dilemmas

Table 1. One-way analysis of variance: ethical dilemma incidence experience by head nurses and application of leadership styles (n = 278, the preselected significance level is P<0.05)

Leadership styles	Levene's statistics	Sig.		Sum of squares	df	Mean square	F	Sig.
Autocratic	2.225	0.001	Between groups	288.728	6	48.121	5.524	0.000
			Within groups	230.826	271	8.712		
			Total	2649.554	277			
Laissez-faire	3.803	0.001	Between groups	44.719	6	7.453	1.235	0.289
			Within groups	1636.133	271	6.037		
			Total	1680.853	277			
Bureaucratic	1.740	0.013	Between groups	219.527	6	36.588	3.972	0.001
			Within groups	2496.386	271	9.212		
			Total	2715.914	277			
Coaching	3.671	0.002	Between groups	64.535	6	10.756	1.573	0.155
			Within groups	1852.606	271	6.836		
			Total	1917.140	277			
Charismatic	1.638	0.138	Between groups	134.677	6	22.446	2.932	0.009
			Within groups	2074.646	271	7.656		
			Total	2209.324	277			
Democratic	2.996	0.008	Between groups	53.349	6	8.892	1.138	0.341
			Within groups	2117.874	271	7.815		
			Total	2171.223	277			
Affiliate	1.747	0.111	Between groups	82.590	6	13.765	1.541	0.165
			Within groups	2420.589	271	8.932		
			Total	2503.180	277			
Sustainable	1.935	0.076	Between groups	37.587	6	6.265	0.781	0.585
			Within groups	2172.489	271	8.017		
			Total	2210.076	277			
Authoritative	2.663	0.016	Between groups	98.550	6	16.425	1.937	0.075
			Within groups	2298.000	271	8.480		
			Total	2396.550	277			
Transformational	1.835	0.093	Between groups	79.615	6	13.269	1.782	0.103
			Within groups	2018.256	271	7.447		
			Total	2097.871	277			

Table 2. Descriptive statistics: the incidence of ethical dilemmas and application of leadership styles by head nurses

Leadership styles	Several times in a day		One time in a day		Several times in a week	
	Mean	SD	Mean	SD	Mean	SD
Autocratic	3.36	2.59	3.27	1.69	3.15	2.85
	One time in a week		Several times in one month		One time in one month	
	Mean	SD	Mean	SD	Mean	SD
	2.93	3.03	2.68	3.67	3.16	3.0
	Rare					
	Mean	SD				
	2.66	3.72				
Laissez-faire	Several times in a day		One time in a day		Several times in a week	
	Mean	SD	Mean	SD	Mean	SD
	3.92	2.06	3.74	2.78	3.75	2.21
	One time in a week		Several times in one month		One time in one month	
	Mean	SD	Mean	SD	Mean	SD
	3.69	2.88	3.88	3.54	4.01	2.01
	Rare					
	Mean	SD				
	3.72	2.47				
Bureaucratic	Several times in a day		One time in a day		Several times in a week	
	Mean	SD	Mean	SD	Mean	SD
	3.3	3.17	3.30	2.04	3.3	3.08
	One time in a week		Several times in one month		One time in one month	
	Mean	SD	Mean	SD	Mean	SD
	2.78	1.99	2.67	3.52	3.2	2.7
	Rare					
	Mean	SD				
	3.01	3.64				
Coaching	Several times in a day		One time in a day		Several times in a week	
	Mean	SD	Mean	SD	Mean	SD
	3.98	2.47	3.86	1.64	3.89	2.69
	One time in a week		Several times in one month		One time in one month	
	Mean	SD	Mean	SD	Mean	SD
	3.71	2.25	3.94	3.37	4.12	2.82
	Rare					
	Mean	SD				
	3.71	2.87				
Charismatic	Several times in a day		One time in a day		Several times in a week	
	Mean	SD	Mean	SD	Mean	SD
	3.76	2.83	3.71	1.95	3.63	3.08
	One time in a week		Several times in one month		One time in one month	
	Mean	SD	Mean	SD	Mean	SD
	3.37	2.47	3.43	3.21	3.97	2.23
	Rare					
	Mean	SD				
	3.41	2.63				

Continuation of **Table 2**

Democratic	Several times in a day		One time in a day		Several times in a week	
	Mean	SD	Mean	SD	Mean	SD
	4.17	2.89	4.06	1.78	4.02	3.05
	One time in a week		Several times in one month		One time in one month	
	Mean	SD	Mean	SD	Mean	SD
	4.0	3.02	4.14	3.6	4.29	1.86
	Rare					
	Mean	SD				
	3.89	2.29				
Affiliate	Several times in a day		One time in a day		Several times in a week	
	Mean	SD	Mean	SD	Mean	SD
	4.17	2.7	3.86	2.9	3.98	3.06
	One time in a week		Several times in one month		One time in one month	
	Mean	SD	Mean	SD	Mean	SD
	30	3.95	4.16	3.06	4.22	2.42
	Rare					
	Mean	SD				
	3.83	3.28				
Sustainable	Several times in a day		One time in a day		Several times in a week	
	Mean	SD	Mean	SD	Mean	SD
	4.05	2.79	3.87	2.11	3.92	3.0
	One time in a week		Several times in one month		One time in one month	
	Mean	SD	Mean	SD	Mean	SD
	3.82	2.98	4.1	3.45	4.09	3.25
	Rare					
	Mean	SD				
	3.94	2.19				
Authoritative	Several times in a day		One time in a day		Several times in a week	
	Mean	SD	Mean	SD	Mean	SD
	4.0	2.89	3.74	1.83	3.77	3.2
	One time in a week		Several times in one month		One time in one month	
	Mean	SD	Mean	SD	Mean	SD
	3.6	3.21	3.9	3.57	4.03	2.66
	Rare					
	Mean	SD				
	3.66	2.33				
Transformational	Several times in a day		One time in a day		Several times in a week	
	Mean	SD	Mean	SD	Mean	SD
	4.08	2.72	3.9	2.21	3.99	2.8
	One time in a week		Several times in one month		One time in one month	
	Mean	SD	Mean	SD	Mean	SD
	3.83	2.58	4.09	2.85	4.33	1.97
	Rare					
	Mean	SD				

Table 3. Correlations: reasons to apply different leadership styles when head nurses make decisions (N=278)

Leadership style		Recognition of head nurse's authority	Head nurse's participation in teamwork with nurses	Reflection on decision-making	Opportunity to develop organisational competence
Autocratic	Correlation coefficient	0.216**	0.345**	0.283**	0.294**
	Sig. (2-tailed)	0.001	0.000	0.000	0.000
		Experiencing satisfaction after decision-making	Value of ethics at organisation	Personal head nurse's attributes	
	Correlation coefficient	0.584**	0.282**	0.294**	
	Sig. (2-tailed)	0.000	0.000	0.000	
Laissez-faire		Recognition of head nurse's authority	Head nurse's participation in teamwork with nurses	Reflection on decision-making	Opportunity to develop organisational competence
	Correlation coefficient	0.391**	0.419**	0.318**	0.459**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
		Experiencing satisfaction after decision-making	Value of ethics at organisation	Personal head nurse's attributes	
	Correlation coefficient	0.354**	0.223**	0.379**	
	Sig. (2-tailed)	0.000	0.001	0.000	
Bureaucratic		Recognition of head nurse's authority	Head nurse's participation in teamwork with nurses	Reflection on decision-making	Opportunity to develop organisational competence
	Correlation coefficient	0.167**	0.241**	0.167**	0.264**
	Sig. (2-tailed)	0.008	0.000	0.008	0.000
		Experiencing satisfaction after decision-making	Value of ethics at organisation	Personal head nurse's attributes	
	Correlation coefficient	0.493**	0.193	0.172**	
	Sig. (2-tailed)	0.000	0.001	0.007	
Coaching		Recognition of head nurse's authority	Head nurse's participation in teamwork with nurses	Reflection on decision-making	Opportunity to develop organisational competence
	Correlation coefficient	0.501**	0.584**	0.501**	0.671**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000

Continuation of **Table 3**

		Experiencing satisfaction after decision-making	Value of ethics at organisation	Personal head nurse's attributes	
	Correlation coefficient	0.519**	0.312**	0.472**	
	Sig. (2-tailed)	0.000	0.000	0.000	
Charismatic		Recognition of head nurse's authority	Head nurse's participation in teamwork with nurses	Reflection on decision-making	Opportunity to develop organisational competence
	Correlation coefficient	0.499**	0.571**	0.467**	0.893**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
		Experiencing satisfaction after decision-making	Value of ethics at organisation	Personal head nurse's attributes	
	Correlation coefficient	0.588**	0.301**	0.489**	
	Sig. (2-tailed)	0.000	0.000	0.000	
Democratic		Recognition of head nurse's authority	Head nurse's participation in teamwork with nurses	Reflection on decision-making	Opportunity to develop organisational competence
	Correlation coefficient	0.599**	0.540**	0.465**	0.674**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
		Experiencing satisfaction after decision-making	Value of ethics at organisation	Personal head nurse's attributes	
	Correlation coefficient	0.527**	0.569**	0.483**	
	Sig. (2-tailed)	0.000	0.000	0.000	
Affiliate		Recognition of head nurse's authority	Head nurse's participation in teamwork with nurses	Reflection on decision-making	Opportunity to develop organisational competence
	Correlation coefficient	0.627**	0.530**	0.454**	0.678**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
		Experiencing satisfaction after decision-making	Value of ethics at organisation	Personal head nurse's attributes	
	Correlation coefficient	0.504**	0.375**	0.498**	
	Sig. (2-tailed)	0.000	0.000	0.000	

Continuation of **Table 3**

Sustainable		Recognition of head nurse's authority	Head nurse's participation in team-work with nurses	Reflection on decision-making	Opportunity to develop organisational competence
	Correlation coefficient	0.591**	0.557**	0.495**	0.678**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
		Experiencing satisfaction after decision-making	Value of ethics at organisation	Personal head nurse's attributes	
	Correlation coefficient	0.539**	0.334**	0.398**	
	Sig. (2-tailed)	0.000	0.000	0.000	
Authoritative		Recognition of head nurse's authority	Head nurse's participation in teamwork with nurses	Reflection on decision-making	Opportunity to develop organisational competence
	Correlation coefficient	0.627**	0.568**	0.503**	0.694**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
		Experiencing satisfaction after decision-making	Value of ethics at organisation	Personal head nurse's attributes	
	Correlation coefficient	0.543**	0.320**	0.463**	
	Sig. (2-tailed)	0.000	0.000	0.000	
Transformational		Recognition of head nurse's authority	Head nurse's participation in teamwork with nurses	Reflection on decision-making	Opportunity to develop organisational competence
	Correlation coefficient	0.624**	0.546**	0.532**	0.647**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
		Experiencing satisfaction after decision-making	Value of ethics at organisation	Personal head nurse's attributes	
	Correlation coefficient	0.563**	0.379**	0.444**	
	Sig. (2-tailed)	0.000	0.000	0.000	

Consequences of applied leadership styles when a head nurse makes decisions in ethical dilemmas

Table 1. Correlations: consequences of applied leadership styles in ethical dilemmas (Spearman's rho; ** - correlation is significant at the 0.01 level (2-tailed); * - correlation is significant at the 0.05 level (2-tailed)) (N=278)

Leadership style		Experience of professional authority	Satisfaction of needs	Improvement of competencies through decision-making	Improvement of managerial competence	Experiences regarding controversial consequences
Autocratic	Correlation coefficient	0.208**	0.247**	0.280**	0.285**	0.559**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Laissez-faire	Correlation coefficient	0.320**	0.283**	0.418**	0.359**	0.335**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Bureaucratic	Correlation coefficient	0.148*	0.251**	0.240**	0.260**	0.474**
	Sig. (2-tailed)	0.013	0.000	0.000	0.000	0.000
Coaching	Correlation coefficient	0.451**	0.346**	0.548**	0.482**	0.485**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Charismatic	Correlation coefficient	0.472**	0.401**	0.461**	0.499**	0.568**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Democratic	Correlation coefficient	0.537**	0.338**	0.512**	0.399**	0.508**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Affiliate	Correlation coefficient	0.548**	0.303**	0.563**	0.458**	0.504**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Sustainable	Correlation coefficient	0.551**	0.397**	0.604**	0.524**	0.503**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Authoritative	Correlation coefficient	0.594**	0.447**	0.641**	0.540**	0.506**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Transformational	Correlation coefficient	0.553**	0.365**	0.579**	0.497**	0.495**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000

Table 2. Correlations: needs' satisfaction-related consequences of applied leadership styles in ethical dilemmas (N=278)

Leadership style		Nurses' personal needs	Nurses' professional needs	Head nurses' personal needs	Head nurses' professional needs	Patients' needs	Patients' relatives' needs	The ward needs	Hospital needs
Autocratic	Correlation coefficient	0.061**	0.271**	-0.068	0.003	-0.035	0.408**	0.466**	0.032
	Sig. (2-tailed)	0.310	0.000	0.258	0.957	0.556	0.000	0.000	0.600
Laissez-faire	Correlation coefficient	0.260**	0.325**	0.160**	0.126*	-0.001	0.233**	0.235**	0.070
	Sig. (2-tailed)	0.000	0.000	0.008	0.036	0.990	0.000	0.000	0.242
Bureaucratic	Correlation coefficient	0.031	0.264**	-0.002	0.110	-0.031	0.382**	0.484**	0.068
	Sig. (2-tailed)	0.611	0.000	0.975	0.067	0.606	0.000	0.000	0.259
Coaching	Correlation coefficient	0.263**	0.461**	0.111	0.144*	0.126*	0.327**	0.335**	0.111
	Sig. (2-tailed)	0.000	0.000	0.065	0.016	0.036	0.000	0.000	0.065
Charismatic	Correlation coefficient	0.204**	0.479**	0.082	0.099	0.054	0.440**	0.493**	0.168**
	Sig. (2-tailed)	0.001	0.000	0.173	0.099	0.372	0.000	0.000	0.005
Democratic	Correlation coefficient	0.276**	0.455**	0.187**	0.157**	0.080	0.279**	0.231**	0.117
	Sig. (2-tailed)	0.000	0.000	0.002	0.009	0.182	0.000	0.000	0.051
Affiliate	Correlation coefficient	0.277**	0.463**	0.183**	0.106	0.089	0.291**	0.201**	0.052
	Sig. (2-tailed)	0.000	0.000	0.002	0.079	0.139	0.000	0.001	0.385
Sustainable	Correlation coefficient	0.301**	0.499**	0.157**	0.217**	0.182**	0.384**	0.327**	0.159**
	Sig. (2-tailed)	0.000	0.000	0.009	0.000	0.002	0.000	0.000	0.008
Authoritative	Correlation coefficient	0.353**	0.534**	0.219**	0.223**	0.198**	0.387**	0.318**	0.196**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Transformational	Correlation coefficient	0.263**	0.492**	0.181**	0.253**	0.121*	0.334**	0.342**	0.119*
	Sig. (2-tailed)	0.000	0.000	0.002	0.000	0.044	0.000	0.000	0.047

Table 3. Competence improvement-related consequences of applied leadership styles in ethical dilemmas (N=278)

Leadership style		Teamwork competencies	Social competencies	Management competencies	Administrative competencies
Autocratic	Correlation coefficient	0.162**	0.203**	0.204**	0.277**
	Sig. (2-tailed)	0.007	0.001	0.001	0.000
		Educational competencies	Professional competencies	Leadership competencies	Ethical competencies
	Correlation coefficient	0.190**	0.249**	0.261**	0.163**
	Sig. (2-tailed)	0.001	0.000	0.000	0.007
Laissez-faire		Teamwork competencies	Social competencies	Management competencies	Administrative competencies
	Correlation coefficient	0.356**	0.327**	0.303**	0.330**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
		Educational competencies	Professional competencies	Leadership competencies	Ethical competencies
	Correlation coefficient	0.344**	0.359**	0.362**	0.324**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000

Continuation of **Table 3**

Bureaucratic		Teamwork competencies	Social competencies	Management competencies	Administrative competencies
	Correlation coefficient	0.192**	0.166**	0.287**	0.204**
	Sig. (2-tailed)	0.001	0.005	0.000	0.001
		Educational competencies	Professional competencies	Leadership competencies	Ethical competencies
	Correlation coefficient	0.178**	0.241**	0.186**	0.113
	Sig. (2-tailed)	0.003	0.000	0.002	0.060
Coaching		Teamwork competencies	Social competencies	Management competencies	Administrative competencies
	Correlation coefficient	0.499**	0.359**	0.504**	0.510**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
		Educational competencies	Professional competencies	Leadership competencies	Ethical competencies
	Correlation coefficient	0.479**	0.583**	0.485**	0.468**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
Charismatic		Teamwork competencies	Social competencies	Management competencies	Administrative competencies
	Correlation coefficient	0.459**	0.271**	0.409**	0.393**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
		Educational competencies	Professional competencies	Leadership competencies	Ethical competencies
	Correlation coefficient	0.449**	0.460**	0.440**	0.358**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
Democratic		Teamwork competencies	Social competencies	Management competencies	Administrative competencies
	Correlation coefficient	0.489**	0.397**	0.458**	0.516**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
		Educational competencies	Professional competencies	Leadership competencies	Ethical competencies
	Correlation coefficient	0.482**	0.536**	0.475**	0.453**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
Affiliate		Teamwork competencies	Social competencies	Management competencies	Administrative competencies
	Correlation coefficient	0.552**	0.422**	0.522**	0.520**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
		Educational competencies	Professional competencies	Leadership competencies	Ethical competencies
	Correlation coefficient	0.529**	0.579**	0.499**	0.488**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
Sustainable		Teamwork competencies	Social competencies	Management competencies	Administrative competencies
	Correlation coefficient	0.589**	0.505**	0.533**	0.498**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000

Continuation of **Table 3**

Sustainable		Educational competencies	Professional competencies	Leadership competencies	Ethical competencies
	Correlation coefficient	0.514**	0.579**	0.503**	0.488**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
Authoritative		Teamwork competencies	Social competencies	Management competencies	Administrative competencies
	Correlation coefficient	0.567**	0.481**	0.579**	0.575**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
		Educational competencies	Professional competencies	Leadership competencies	Ethical competencies
	Correlation coefficient	0.588**	0.614**	0.559**	0.524**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
Transforma-tional		Teamwork competencies	Social competencies	Management competencies	Administrative competencies
	Correlation coefficient	0.524**	0.419**	0.543**	0.549**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
		Educational competencies	Professional competencies	Leadership competencies	Ethical competencies
	Correlation coefficient	0.489**	0.571**	0.492**	0.458**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000

Table 4. Correlations: management competence improvement-related consequences of applied leadership styles in ethical dilemmas (N=278)

Leader-ship style		Establi-shed sys-tem of competence development for nurses on the ward	Created strategy of finance allocation on the ward	Developed communicati on system on the ward	Establi-shed team-working culture on the ward	Encouraged leadership among nurses on the ward
Autocratic	Correla-tion coefficient	0.224**	0.065	0.293**	0.278**	0.085
	Sig. (2-tailed)	0.000	0.279	0.000	0.000	0.155
Laissez-faire	Correla-tion coefficient	0.199**	0.188**	0.177**	0.329**	0.432**
	Sig. (2-tailed)	0.001	0.002	0.003	0.00	0.000
Bureau-cratic	Correla-tion coefficient	0.249**	0.018	0.190**	0.249**	0.049
	Sig. (2-tailed)	0.000	0.763	0.001	0.000	0.419
Coaching	Correla-tion coefficient	0.336**	0.154*	0.385**	0.437**	0.439**
	Sig. (2-tailed)	0.000	0.010	0.000	0.000	0.000
Charis-matic	Correla-tion coefficient	0.373**	0.191**	0.374**	0.456**	0.328**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000

Continuation of **Table 4**

Democratic	Correlation coefficient	0.264**	0.160**	0.267**	0.438**	0.410**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Affiliate	Correlation coefficient	0.255**	0.118*	0.418**	0.482**	0.420**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Sustainable	Correlation coefficient	0.285**	0.187**	0.444**	0.483**	0.444**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Authoritative	Correlation coefficient	0.326**	0.179**	0.439**	0.468**	0.469**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Transformational	Correlation coefficient	0.336**	0.172**	0.354**	0.468**	0.476**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000

Table 5. Correlations: the experiences regarding ethically controversial consequences in ethical dilemmas (N=278)

Leadership style		Head nurse's satisfaction because of satisfying the patients' needs	Head nurse's satisfaction because of satisfying patient relatives' needs	Head nurse's satisfaction because of following professional expectations	Head nurse's satisfaction because of implementting administrational rules and responsibilities	Head nurse's satisfaction because of decreasing the gap bet-ween organisational and professionnal nursing values
Autocratic	Correlation coefficient	0.497**	0.446**	0.507**	0.457**	0.449**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Laissez-faire	Correlation coefficient	0.315**	0.264**	0.257**	0.239**	0.308**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Bureaucratic	Correlation coefficient	0.441**	0.363**	0.459**	0.411**	0.285**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Coaching	Correlation coefficient	0.452**	0.394**	0.523**	0.374**	0.390**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Charismatic	Correlation coefficient	0.572**	0.508**	0.544**	0.433**	0.357**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000

Continuation of **Table 5**

Democra-tic	Correla-tion coefficient	0.509**	0.457**	0.520**	0.363**	0.356**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Affiliate	Correla-tion coefficient	0.423**	0.389**	0.504**	0.390**	0.435**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Sustai-nable	Correla-tion coefficient	0.454**	0.423**	0.520**	0.411**	0.419**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Authorita-tive	Correla-tion coefficient	0.476**	0.425**	0.520**	0.383**	0.420**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
Transfor-mational	Correla-tion coefficient	0.480**	0.417**	0.506**	0.373**	0.435**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000

Original publications I-IV

Ethical dilemmas concerning decision-making within health care leadership: a systematic literature review

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Key words: *decision-making; ethical dilemma; health care leadership/management/administration; systematic literature review.*

Summary. *The objective was to describe the research methods and research focuses on ethical dilemmas concerning decision-making within health care leadership.*

Material and methods. The search was conducted on Medline and PubMed databases (1998–2008). The systematic review included 21 selected articles.

Results. The ethical dilemmas concerning decision-making within health care leadership are related to three levels: institutional (particular organization), political and local interface (local governmental structure), and national (professional expertise and system). The terms that are used as adequate to the term of "ethical dilemma" are the following: "continuous balancing," "result of resource allocation," "gap between professional obligations and possibilities," "ethically controversial situation," "concern about interactions," "ethical difficulty," "outcome of medical choices," "concern about society access to health care resources," "ethically difficult/challenging situation," "(the consequence of) ethical concern/ethical issue." In qualitative studies, a semi-structured interview and qualitative content analysis are the most commonly applied methods; in quantitative studies, questionnaire surveys are employed. In the research literature, there is a lack of specification according to professional qualification of health care professionals concerning ethical dilemmas by decision-making within health care management/administration.

Conclusions. The research on ethical dilemmas in health care leadership, management, and administration should integrate data about levels at which ethical dilemmas occur and investigate ethical dilemmas as complex phenomena because those are attached to decision-making and specific nuances of health care management/administration. In this article, the presented scientific problem requires extensive scientific discussions and research on ethical dilemmas concerning decision-making within health care leadership at various levels.

Introduction

Relevance. Management and administration in health care is in a state of revolution based on positive transformational changes (1). The reason why health care organizations exist is to provide better care for individuals through providing shared resources for groups of people. This creates a paradox at the heart of a health care organization because serving the interests of groups sometimes encounters serving the needs of individuals. In this context, ethical dilemmas emerge that are experienced by leaders by virtue of their position in the organization (2). Today's leaders in health care are being challenged by many demands and issues. To confront these many demands, health care leaders must have the ability to make decisions based on ethics (3). Moreover, there is a need to recognize the complex interconnectivity between the decision-making, leadership, and ethical dilemma in health care management / administration context.

Originality. Literature on management, administration, or leadership has been growing rapidly, and this growing literature treats the leadership as a natural function or management role (4) and it is seen not rare more as nonformal activity (5) than formal position. When decisions concerning the financial resource allocation, division of a budget for institutional versus health care personnel needs, limited or prolonged treatment of the patients should be made and

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this should be balanced with the needs of customers, patients, and health care personnel, etc., not only managers or administrators but also leaders play key roles. Namely, they integrate their personality and status power within various ethical dilemmas and make decisions (6–8). In growing scientific literature concerning management, administration, and leadership in health care, the main emphasis is on ethical codes (9), ethical principles (10), ethical reasoning (11), etc. There is a lack of scientific literature in general and in health care research specifically with the focus on ethical dilemmas concerning decision-making within health care leadership by defining ethical dilemma and highlighting essential aspects to which it is attached by being integrated with decision-making and leadership.

The *objective* of this systematic review is to describe the research methods and research focuses on ethical dilemmas concerning decision-making within health care leadership.

The following *research question*s were addressed: What is the scope of studies for the topic? How is the ethical dilemma concerning decision-making within health care leadership defined?

Material and methods

Search methods. The systematic review concerns ethical dilemmas within health care management/administration with the focus on empirical research about decision-making by leaders.

Database searches. The literature search was conducted on two electronic databases. These databases were Medline and PubMed (1998–2008). The search strategies were specific to database with the key words that reflected health care ethical dilemma, management/administration, and leadership as an integral phenomenon. The search was performed using the following integrated key words that consisted of complex words: "health care management," "health care administration," "decision-making," "health care leadership." The key words were combined using the Boolean operator AND or OR with the second keyword "ethical dilemma."

A search using the main keywords yielded a large number of articles on ethical dilemmas and health care. When the search was limited to empirical studies, leadership, and decision-making only concerning ethical dilemmas, the number of articles was reduced. A total of 888 various studies were identified through the initial search. Having read the abstracts, introductions and conclusions of identified all studies, the articles that presented only health care practice without focus on ethical dilemmas and leadership within decision-making were excluded. In total, 73 articles were accepted for full-text reading. Having read the full-text articles, the articles that presented discussions only on ethical issues without connection to health care management/administration were excluded. Having checked the latter articles, a total of 21 empirical studies that met the inclusion criteria were identified. A summary of the characteristics of the study performed is shown in Figure.

Inclusion and exclusion criteria. The following inclusion criteria were used: the full article was published in scientific peer-reviewed journals in English; the article was published between 1998 and 2008; the article content was based on empirical evidence; the articles were based on integrated approach covering health care (biomedicine, nursing) and social sciences in the articles, the ethical dilemmas were discussed in health care management/administration context with the focus on leadership. Empirical studies with the focus only on social sciences (without integration with health care or nursing) and/or only on public health care approaches were excluded.

Retrieval of references and handling. Only English text papers published in peer-reviewed journals were selected for further review. Research abstracts, perspectives, guidelines, public reports, debates, ethical forums, letters, editorials, synopses, literature notices, commentaries, viewpoints, clinical reviews, news, newsletters, book reviews, research debates, duplicate texts, and conceptual papers were excluded. Content analysis was designed to classify data by the characteristics deemed the integration of theoretical importance and methodological parameters within the systematic literature review (12–16) according to research questions.

Results

Ethical dilemmas within health care management/administration with the focus on decision-making by leaders have been investigated by implementing *qualitative* (n=13), *quantitative* (n=7), and *mixed* (n=1) designs. In studies with the *qualitative design* for data collection, the semi-structured (n=9), unstructured (n=1), narrative (n=1), and focus-group (n=2) interviews were applied. For data analysis in most of the studies, the qualitative content analysis (n=7) and other analysis methods – phenomenological hermeneutics (n=3), grounded theory (n=2), and thematic modified analysis (n=1) – were applied. In all *quantitative design* studies, a questionnaire survey (n=7) was carried out, and for data analysis of all the studies, a

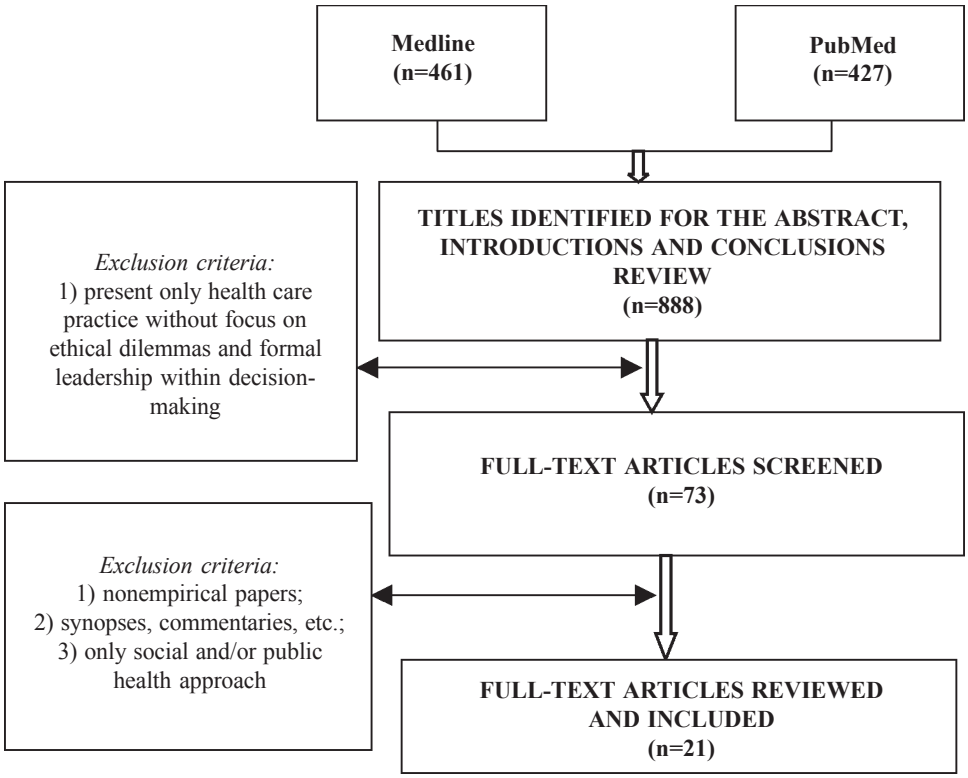

Fig. Search flow for ethical dilemmas concerning decision-making within health care leadership

descriptive analysis (n=7) was applied. The latter analysis method mentioned was integrated with other statistical analysis methods: (a) the complex statistical analysis procedures such as one-way analysis of variance, multivariable logistic regression analysis, multiple linear regression, χ, test, and inferential statistical procedures were applied in most quantitative studies (n=4); (b) the principal component and factorial analyses (n=3). In the study (n=1) with a *mixed design*, a quantitative data collection method such as concept mapping was applied, and for data analysis, multivariate statistical analysis was employed.

In most *qualitative design* studies, the study participants were physicians (executives, department heads, health care politicians) as formal leaders (n=10), and only in several qualitative studies (n=3), nurse executives as a part of mixed sample with the physicians had participated. In *quantitative design* studies, the study sample included nurses-executives with the following participants: nurses-practitioners, physicians-practitioners and executives (n=1); nurses-practitioners, practitioners and physicians-managers, and therapists (n=1); physicians-practitioners and executives, social workers, psychologists, mental health counselors (n=1). In addition, the quantitative studies enrolled physicians-practitioners and formal leaders (department heads, clinic and hospital executives) (n=1) and with therapists-managers (n=1). In a *mixed design* study, the participants were health care professionals (physicians and nurses-practitioners, and executives), health care policy makers, patients and their family members, and members of social environment (n=1).

Definition of ethical dilemma concerning decision-making within health care leadership at different levels

The empirical articles, where the ethical dilemma would be defined, have not been found. However, in the content of the selected articles, the various terms were used, which were treated as adequate to the term "ethical dilemma." The context of the ethical dilemma was also highlighted. According to reviewed selected articles, it could be summarized that decision-making concerning ethical dilemmas within health care leadership is implemented at three levels, such as 1) political and local interface, 2) national, and 3) institutional. The division of ethical dilemmas into mentioned levels is one of the results of the systematic review, and it was influenced by methodological decisions presented in the articles: the studies were performed with study participants from the three

mentioned levels, and ethical dilemmas concerning decision-making within health care were connected to various aspects at a specific level (see Table).

- *Political and local interface level.* Decisions are made by health care politicians from municipalities (rural, urban) or government with the focus on local communities or regions (17, 18), i.e., by local government. The politics is contextual and needs to be explained in local context when the actual decisions should be made (19–21).
- *National level.* The decision-makers/leaders of the national level (from various parts of one country or several institutions with the inclusion of various professionals that are specific for the country health care system) are concentrated on implementation of general health care management (22) and administration (23) principles in national context with the focus on the needs of country inhabitants (24, 25). This level integrates expertise and system.
- *Institutional level.* The formal leaders of institutions, such as general management (20, 26–28) or hospital/health care center administration, or a formal team leader as a head of the department make decisions (10, 32, 33).

Interface level of political and local levels. The local and national economic context directly influences the decisions of politicians because they should manage the budget, which they have, but the society

Table. Explanations of ethical dilemmas concerning decision-making within health care leadership at the three levels: institutional, political and local interface, and national

Authors	Explanation of ethical dilemma
	Political and local interface level
Lauridsen et al., 2008 (17)	Ethical dilemma is an ethically controversial situation, when care professionals should act as economic gatekeepers, and trade-offs are concerned about economic issues that are treated as health outcomes for the patient within the health care system.
Husain et al., 2007 (18)	Ethical dilemma is the result of resource allocation within health care sector, where political, ethical, and technical judgments interplay.
Sarikaya and Erbaydar, 2007 (20)	Ethical dilemma is the gap between professional obligations and possibilities of health care professionals, and efficacy of health care system.
Liegeois and Van Audedhove, 2005 (21)	Ethical dilemma is the continuous balancing with the need to make decisions on the setting aside budgetary resources versus the provision of further financial incentives for community care.
	National level
Chipp et al., 2008 (22)	Ethical dilemma is the ethical difficulty that arises concerning principles of patient's confidentiality, which emerge for health care providers in rural and small urban communities.
Berney et al., 2005 (23)	Ethical dilemma is an outcome of medical choices based on problem-solving (identifying the single and most correct solution to a problem, which requires expertise in patient's limited role concerning his/her involvement) and decision-making (making a choice from a number of possible alternatives by involving trade-offs).
Hurst et al., 2005 (24)	Ethical dilemma means the concern about specific interactions that are actual only for national/country context, e.g., interactions between ethical consultants and physicians.
Warner and Monaghan-Geernaert, 2005 (25)	Ethical dilemma is the concern about society access to health care resources by balancing between the lack of available health care resources and responsibility for quality care.
	Institutional level
Mamhidir et al., 2007 (19)	Ethical dilemma means being in ethically challenging or difficult situations where the physicians- and nurses-leaders should balance between loyalty to their job, which forces them to make reductions, and own conviction that they implement their mission concerning provision of good health care.
Wienand et al., 2007 (26)	Ethical dilemma is balancing between several decisions concerning the following organizational climate components: performance assessment and reward systems, leadership style in the unit, job satisfaction, organizational communication, perceived quality of care, team spirit, as well as training and development
Torjuul et al., 2004 (30)	Ethical dilemma is integral and include patient's autonomy, justice, and conflict issues among parties at the same time when the decision should be made concerning a patient.
Saad Bin Saed, 1999 (32)	Ethical dilemma as a consequence of the emerged "ethical concern" or "ethical issue" that stipulates to make decisions by leaders-specialists representing an institution or executives who monitor implementation of medical practice standards at the institution.

is focused only on patients as vulnerable people (21). Politicians as human beings experience "double" ethical dilemma – as politicians being in high positions and as human beings (20, 34). Effectiveness and efficiency tend to be the primary concern of policy makers and therefore to dominate their perspective on good care (17, 18, 35). *Ethical dilemma at interface level of political and local levels* is named differently:

- *Ethical dilemma* as *continuous balancing* is experienced because of increased care needs together with declining budgets that contribute to ethical challenges in health care system (24, 36). It is associated with a lack of good care (17, 20), weaknesses in medical support (17), dissimilar focuses between caring systems, justness in the distribution of care and deficient information (18, 21).
- *Ethical dilemma* as *a result of resource allocation* is concerned about setting aside budgetary resources versus the provision of further financial incentives for community care (17, 18, 20, 21).
- *Ethical dilemma* as *a gap between professional obligations and possibilities* is perceived through the most critical issue in health care system and is related to the surveillance system (20, 37).
- *Ethical dilemma* as *an ethically controversial situation* is experienced through physician's obligation to inform the patients (17, 35).

The results of literature review revealed that ethical dilemmas concerning decision-making within health care leadership at an interface level of political and local levels are related to the following aspects: economic concern about country's health care system (17, 19), requirements for quality care in care settings and medical support (19), standardized system for quality care assessment/evaluation in country's health care institutions (21), objective acknowledgment of society about local health care situation (18, 20).

National level. The national level is mostly concentrated on professional activities of physicians (23, 24). A physician becomes as a representative of health care system, as a specialist and as an expert – a professional. Besides, he/she is a person-professional who should take responsibility for health care decisions concerning patients (22, 25). *Ethical dilemma at national level* is named variously:

- *Ethical dilemma* as *a concern about specific interactions among specialists* means that every country has its health system, which includes general and specific aspects (38). These integrate the classification of specialists and national infrastructure of health care system in a country (23, 24).
- *Ethical dilemma* is treated as *ethical difficulty* in national context with the focus on rural or small communities (that are not rare ethnic) concerning principles of patient's confidentiality. This difficulty emerges for health care providers in rural and small urban communities (22, 39).
- *Ethical dilemma* as *an outcome of medical choices* is attached to current dominant ideology of health care in Western countries. This idea supports the active participation of patients in decision-making (23, 40), but this is less accepted in other countries, for example, in Japan, where physician's paternalism remains dominant (35).
- *Ethical dilemma* as *a concern about society's access to health care resources* is related to three aspects: access to health care, patient-caregiver relationship, and reactions to stigmatizing illnesses (24, 25). It appears that overlapping between personal and professional roles is perceived and handled differently and, perhaps, is treated in rural than urban areas more adaptively.

The systematic literature review illuminated that ethical dilemmas concerning decision-making within health care leadership at national level is connected to the following aspects: society's viewpoints concerning competence of health care professionals (24), (non)formal interactions between health care providers and rural communities (22), professional authority of health care specialists in society within their interactions with the patients (23), and patients' access to health care (25).

Institutional level. The ethical dilemma at institutional level is integral. It includes issues and conflicts among several parties such as health care personnel, patients and their relatives, organization and its administration. In such context, the decision should be made by leaders concerning patients' wellness and quality of care (29, 30). *An ethical dilemma at institutional level* is named differently:

- *Ethically difficult* or *ethically challenging situation* is experienced when physicians-leaders and nurses-leaders should make decisions that would have negative consequences for care through striving to satisfy the society and institutional expectations (19, 41).
- The *balancing between several decisions as the ethical dilemma* emerges in the context of organizational climate and loyalty organizational values (26, 29).
- *Ethical concern* or *ethical issue* is perceived as an ethical dilemma concerning physician's inattentiveness to medical needs of his/her patients and monitoring of implementation of accepted stan-

dards concerning medical practice by all medical personnel (32).

- *The consequence of ethical issue* or *concern as an ethical dilemma* is experienced through four types of interactions (29, 30): 1) physician-other physician colleague is balancing between autonomous personal professional expertise-based decisions that are connected to physician's competence and his/her acting according to recommendations of other colleague physicians; 2) physician-community interaction means the increasing expectations and pressure from patients in order to make more despite limited and unequally distributed resources; 3) interaction between a physician and hospital executives is related to patients' diagnoses and consequences in which they are coded to determine the amount of government reimbursement, which the hospital receives; 4) physician-health care system interaction means that the physician experiences a dilemma by balancing between himself/herself as a professional and human being in the context of existing problems within health care system (e.g., long waiting lists for specialized treatment and surgeries).

From the systematic literature review, it is evident that ethical dilemmas concerning decision-making within health care leadership at institutional level are attached to the following aspects: professional and personal needs of health care personnel (19, 26), patients' needs (26, 32), transformation of organization into a public company, teamwork within the units (24, 26–28), customers' complaints, institutional information and communication system (26–28, 33), human resource development and financial resource allocation (26, 33), organizational values (11, 20, 31), application of the monitoring system of ethical principles by health care personnel (27, 30, 32, 33), interactions between health care professionals and patients (10, 24, 29–31, 33), interactions between health care professionals and their colleagues (24, 29, 31), interactions between health care professionals and hospital executives (formal leaders) (29, 31), institutional authority of health care staff (24, 33), competence of health care staff, institutional openness to society (33), and professional obligations of health care personnel (20).

Limitations

This systematic review has some limitations. The first is related to complicated multidisciplinary focus of the systematic review, which integrates four concepts such as "ethical dilemma," "health care leadership," "decision-making," and "health care management/administration," that are not studied in a complex in any of the reviewed studies and are presented in the articles with the focus on one of the mentioned concepts explaining it in a specific context. Such a situation encouraged us as the article authors to find out the way how to highlight all the mentioned four concepts in every analyzed study that was limited to three levels. The second is related to scope of the scientific articles analyzed. This has to do with the different sites, chosen study samples, where physicians are most often the participants of the studies, and the analyzed "ethical dilemmas" most often are concentrated on ethical issues concerning physician's position such as a leader, manager, or executive. Other professionals, for example, nurses, social workers, physiotherapists, clinical psychologists had participated only in several studies. In addition, the quotes of participants in a sample concerning their professional status are very different. The methodologies of studies are traditional and do not differ at different levels such as political and local interface, national, and institutional. All these aspects limit the possibilities of comparability between sites, sample participants according their professional status, and research methodologies applied. The third limitation is related to exclusion of the articles that represent the studies with only social science and public health approach though the "health care" context integrates both. The fourth limitation is related to decision to use two core keywords such as "ethical dilemma" and "health care" (by adding management or administration) without focusing specifically on allied terms such as "nursing," "nursing care," or "biomedicine" (management or administration). The fifth limitation of this systematic review is that it covered only studies in the English language.

Discussion

To our knowledge, this is the first systematic literature review to document ethical dilemmas concerning decision-making within health care leadership. Five conceptual/descriptive (3, 6, 34, 42, 43) reviews and one systematic review (9) related to ethical dilemmas of management/administration sphere concerning decision-making by formal leaders within health care were done. However, they were limited to specific contexts, such as health care research, health care practice and medicine (6), infectious disease outbreaks (34), communication and information issues (9), managed care (42), end-of-life situation of a patient (43), and evidence-based leadership (3).

No study to date has defined the ethical dilemmas

concerning decision-making by leaders within health care. Some authors used directly the term "ethical dilemma" (21, 29, 30, 33, 43). In most cases (according to analyses of this systematic literature review study) for discussions about ethical dilemmas concerning management/administration within health care, the following terms were used: "conflict of interest," "ethical challenge" (6, 19, 43), "ethically difficult situations" (19), "ethical concern" (32), "action ethical dilemma" (29), "ethical issue" (27, 32), "ethical conflict" (42), "ethical difficulty" (22, 24), "ethically controversial situation" (17), "ethical considerations" (25), "ethical leadership" (2). By using these different terms (instead of the term "ethical dilemma"), the authors discuss about ethical dilemmas by broadening the understanding about it, and the term "ethical dilemma" could be found in the text. Nevertheless, no article has defined ethical dilemmas concerning leadership or management/administration within health care. In all the studies analyzed, the ethical dilemmas are contextualized concerning the country such as Denmark (17), Italy (26), Norway (9), Pakistan (18), Saudi Arabia (32), Sweden (19), Turkey (20), United Kingdom (28), United States of America (22, 24, 25, 30), or it is attached to a very specific problem, concern, or issue, e.g., influenza pandemic (27), infectious disease outbreak (34), decisions to limit life-sustaining treatment in intensive care units (10, 31), occupational therapy and physical therapy (33), quality of end-of-life care (43), resource allocation within national AIDS control program (18), bedside rationing (17), rationing of health care (23), etc. The authors of analyzed articles discuss the problems concerning ethics and attach them to decisions, and point them out as possible ethical dilemmas that were met by leaders as decision makers.

According to the analyzed studies, there is no empirical research with the complex focus on integration among ethical dilemma, leadership, and decision-making. In order to broaden the systematic literature review and deepen the understanding about this complex research focus, the terms "health care management" and "health care administration" were added. Such broadening established premises to illuminate that in health care management/administration, ethical dilemmas are concerned with the decision-making, but not between two choices as it is usually described in the literature about ethical dilemmas in health care practice (7, 8). In such a context, the leaders should make decisions by balancing among several choices, e.g., three (6, 27, 30), four (26), six (29), and deciding about one. But the studies analyzed do not highlight this fact, and in most studies, the discussions are concerned about interactions among health care personnel (30) or between health care professionals and patients (29), ethical reasoning of leaders (11), ethical leadership (2), leadership in team-working (10). These examples point out the lack of research focus on the definitions of ethical dilemmas, specifications concerning the decision-makers/leaders at different levels in order to highlight the specific nuances of ethical dilemmas. By reading the analyzed studies, it seems that almost all ethical dilemmas of formal leaders are concerned only about resource allocation (19, 21) or budgetary issues at institutions (28) or municipalities (22, 25). Such understanding narrows the concept of an ethical dilemma concerning leadership as well as management/administration within health care and leaves the readers with the very simple perceptions with the only focus on utilitarian ethics, efficiency, effectiveness, or efficacy that could be counted by ignoring the humanistic aspect. This fact could be argued that the humanistic aspect is illuminated through qualitative studies. Despite the fact that qualitative research by its methodological parameters is attached to ethical dilemma, decision-making by leaders is narrowed into personal perceptions or reasoning about the difficult complex situations that are met in a specific context, for example, critical care (10, 19, 28). This does not lead to the definition of ethical dilemmas concerning decision-making within health care leadership.

Concerning the methodological decisions in qualitative studies, the core method for data collection is a semistructured interview (10, 19, 28, 31), and for data analysis, the qualitative content analysis is applied (18, 20). Not rare, the samples of qualitative research include only physicians, and if in some studies, research participants are representatives also of other health care professions, the balance between those subsamples is not kept. The results are presented with no specification concerning every professional activity that makes difficult to understand the specific nuances of ethical dilemmas concerning decision-making within health care leadership, especially with the focus on various professionals' activities. Quantitative studies mostly are based on questionnaire surveys, and the strategy of sampling usually is not explained, for example, why the sample consists of one-third of physicians-practitioners and two-thirds of physicians' executives (32), but the results are compared. Does this comparability help to understand the decision-making concerning ethical dilemmas as valid? Is it valued from the scientific point of view? The near similar situation is with the study by Wienand et al.

(26), where the sample consisted of thousands of participants who represent the various professions such as physicians, scientists, management employees, nurses, therapists, laboratory and radiology technicians-leaders. However, their distribution in the sample was unequal, and results were presented by generalizing the answers of all the professionals. This context points up that studies lack specification according to professional qualification in leadership of those professionals within ethical dilemma situation concerning health care management/administration context.

Conclusions

In the view of the results of this systematic literature review, it can be suggested that research on ethical dilemmas within health care leadership, management, and administration should integrate data about levels at which the ethical dilemmas occur. In addition, it is important to investigate ethical dilemmas not only as a separate, but also as a complex phenomenon, which is attached to decision-making and specific nuances of health care management/administration context.

In the scientific literature, there is a lack of focus on ethical dilemmas concerning decision-making within health care leadership; nevertheless, this complex phenomenon has come to occupy the forefront of the discourse pertaining to areas of health care management, administration, leadership, and professional ethics in health care and medicine. Generality and inaccuracy of the notion of "ethical dilemma concerning decision-making within health care management" creates the limitations in research and practice of health care management, administration, and leadership. The boundary of this problem encompasses the domains of the decision-makers as leaders and those involved in the conduct of health care management, administration, and leadership research. In addition, it includes those who are responsible for decision-making at various levels within health care. The research problem, which had been presented in this article and solved through the systematic literature review, requires the extensive scientific discussions, and empirical research how to best address the ethical dilemmas concerning decision-making within health care leadership at institutional, national, and political levels, this issue engenders, remains in evolution.

Etinės dilemos, priimant sprendimus sveikatos priežiūros lyderystėje: sisteminė literatūros apžvalga

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Raktažodžiai: sprendimų priėmimas, etinė dilema, sveikatos priežiūros lyderystė/vadyba/administravimas, sisteminė literatūros apžvalga.

Santrauka. *Tyrimo tikslas.* Apibūdinti dilemų, priimant sprendimus sveikatos proežiūros lyderystėje, sveikatos tyrimo metodus ir tyrimo objektus.

Tyrimo medžiaga ir metodai. Mokslo straipsnių atranka atlikta „Medline" ir „PubMed" duomenų bazėse (1998–2008). Sisteminė literatūros analizė apima 21 atrinktą straipsnį.

Rezultatai. Etinės dilemos, priimant sprendimus sveikatos priežiūros lyderystėje, kurios susijusios su trimis lygmenimis: institucijos (konkrečios sveikatos priežiūros organizacijos); politikos ir lokalumo sandūros (institucinės lokalios valdžios struktūros); nacionaliniu (profesinės ekspertizės ir sistemos). Sąvokos, traktuojamos adekvačiomis etinei dilemai, yra tokios: tęstinis balansavimas; išteklių paskirstymo rezultatas; atotrūkis tarp profesinių įsipareigojimų ir galimybių; etiškai kontraversiška situacija; rūpestis dėl specifinių sąveikų, etinis sunkumas; pasirinkimų rezultatas medicinoje; rūpestis dėl sveikatos priežiūros išteklių prieinamumo visuomenei; etiškai sudėtinga/iššūkius kelianti situacija; etinių sprendimų/problemų pasekmė. Tiriant kokybinėse studijose dažniausiai taikomi pusiau struktūruoti interviu ir kokybinė turinio analizė, o tiriant kiekybines studijas, vykdytos apklausos. Literatūroje apie etines dilemas, priimant sprendimus sveikatos priežiūros lyderystėje, stokojama specifikacijos pagal profesines sveikatos priežiūros specialistų kvalifikacijas.

Išvados. Etinių dilemų sveikatos priežiūros lyderystėje, vadyboje ir administravime tyrimai turėtų integruoti duomenis apie lygmenis, kuriuose jų kyla ir tirti jas kaip kompleksinį fenomeną, nes etinės dilemos susijusios su sprendimų priėmimu bei specifiniais niuansais sveikatos priežiūros vadyboje ir administravime. Šiame straipsnyje pristatoma mokslo problema, kuriai įvertinti reikalingos tęstinės mokslinės diskusijos ir tyrimai, kaip tiksliau apibrėžti etinę dilemą, priimant sprendimus sveikatos priežiūros lyderystėje įvairiuose lygmenyse.

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Head nurses' decision-making when managing ethical dilemmas

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Abstract

Purpose – The purpose of this paper is to characterize issues related to head nurses' decision making when managing ethical dilemmas.

Design/methodology/approach – The study is qualitative descriptive, in which researchers stay close to the data. The data were collected in the format of unstructured written reflections. Inductive conventional latent qualitative content analysis was applied to the data.

Findings – The issues of head nurses' management of decision making in ethical dilemmas relate to the following aspects: taking risks in deviating from the formalities, balancing power and humaneness, maintaining the professional hierarchy, managing resistance to change, managing with limited options, and experiencing the decline of nurse's professional and/or human dignity.

Research limitations/implications – Reflections in written form were preferred to semi-structured interviews and the researchers were unable to contact the participants directly and to ask additional questions. All the reflections were produced in a language other than English.

Practical implications – The issues of head nurses' management of decision making in ethical dilemmas reveal the gap between societal expectations and the opportunities to improve nursing leadership in health care organizations.

Social implications – The issues of head nurses' decision making when managing ethical dilemmas are related to contexts that reflect the attitudes of society and health care system toward nursing management.

Originality/value – The study adds to the understanding of issues of the management of decision making in ethical dilemmas. It is an ongoing systematic process that encourages head nurses to learn from practice and manage the quality of care by empowering themselves and nurses to take responsibility for leadership.

Keywords Lithuania, Decision making, Qualitative research, Ethical dilemma, Head nurse, Power relations

Paper type Research paper

Background

Management in health care is in a state of continuous transformational change in order to provide better care through providing shared resources for individuals and/or groups of people. This creates ethical dilemmas in health care organizations, because serving the interests of patients sometimes conflicts with serving the needs of individuals

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and/or institutions. In this context, ethical dilemmas emerge that are experienced by head nurses by virtue of their position in the institution (Shale, 2008).

In resolving ethical dilemmas, head nurses as managers on the ward need to make choices on the basis of their beliefs and feelings about what is fundamentally good or right. The concept "ethical dilemma" is used to refer to circumstances when a choice has to be made between two equally unsatisfactory alternatives (Toren and Wagner, 2010).

A review of public media and research literature on nursing leadership and management in Lithuania (over the years 2002-2014) revealed that ethical dilemmas and decision making are not discussed or studied; head nurses as "middle managers" in health care settings are still seldom research participants. However, several national empirical and conceptual articles present ethics (Jakstiene and Jonaitiene, 2005; Zydziunaite *et al.*, 2010), values (Zydziunaite, 2004; Jankauskiene *et al.*, 2010; Butenas and Zydziunaite, 2013), ethical collisions in health care (Liubarskiene, 2007) and the need for nurses to have more autonomy in decision making (Kriukelyte *et al.*, 2005; Jankauskiene *et al.*, 2007; Greiciene and Petronyte, 2013).

The Health Care Ministry of the Republic of Lithuania (2001) in Lithuania nowadays is the only official document which regulates all kinds of nursing practice in health care institutions. The word "ethics" in this document is mentioned once in 11 paragraphs regarding the "Rights of nurses." The paragraph states that nurses have the right to refuse to apply nursing methods or treatment procedures which contradict medical ethics, as long as it does not endanger a patient's life or health. From this document is evident that the nurse has no opportunity to make autonomous decisions because s/he should follow biomedical ethics, which do not include nursing ethics. Such content supports the existing interprofessional hierarchy in health care practice. Since 1953, nursing world wide has been guided by an ethical code covering everyday decisions in nursing practice (International Council of Nurses, 2012).

The term "head nurse" refers to the formal title of the work position for heads or formal leaders in nursing on wards (Zydziunaite *et al.*, 2013). The head nurse's role engenders conflict because some of the management values disagree inherently with the values of nursing. The meeting of ethics and management raises questions of what is the right and just solution in situations where economic targets, as demanded by current regulatory health care systems, clash with the moral implications and actual outcomes for the parties involved (i.e. patients, nurses, organization, community and profession) (Aitamaa *et al.*, 2010; Toren and Wagner, 2010).

In Lithuania, head nurses are subordinate to the head physicians on the wards as well as to the head nurse of the hospital. The head nurse as a formal leader is responsible for the supervision and management of the administrative and clinical aspects of nursing on the ward (Zydziunaite *et al.*, 2013).

Internationally numerous studies on decision making and ethical dilemmas in nursing management have addressed nursing leadership (Hader, 2011; George, 2005), ethics (Shirey, 2005; Erlen, 2004; Varcoe *et al.*, 2004), management and administration (Sørensen *et al.*, 2011; McMurray and Williams, 2004; VanOyen, 2004), decision making (Shagholi *et al.*, 2010; Holian, 2006; Fraser and Strang, 2004; Dirks and Ferrin, 2002; Lam *et al.*, 2002) and ethical dilemmas in nursing management (Aitamaa *et al.*, 2010; Cooper *et al.*, 2004; Dirks and Skarlicki, 2004; Kälvemark *et al.*, 2004).

However, there is a lack of research nationally and internationally on decision making in ethical dilemmas.

Our understanding of the nature of issues related to head nurses' decision making in ethical dilemmas is, however, limited in two important ways. First, empirical and

theoretical research has tended to focus on ethical decision making, ethical dilemmas, ethical problems and ethical management in health care separately without discussing issues. Second, these studies do not draw on qualitative research to describe the managerial experiences of head nurses in ethical dilemmas through decision making. As a result we know very little about the situations in which head nurses experience ethical dilemmas, what issues they experience, and what are their actions and the consequences of their decision making in ethical dilemmas.

Issues in health care management can be understood as problems requiring a moral solution (Fenwick, 2005). Moral solutions are related to circumstances in which head nurses experience feelings of powerlessness with regard to the well-being of patients and nurses, and at the same time, fulfilling their obligation to the demands of the organization (Aitamaa *et al.*, 2010). In relation to colleagues, the common issues concern the lack of appropriate behavior toward patients or colleagues, insufficient knowledge on the part of nurses, and keeping silent about errors (Hendel *et al.*, 2005; Toren and Wagner, 2010), but in any circumstances decisions should be made. Head nurses deal with issues of decision making, ethics, and management on a daily basis. They face a challenge in meeting the needs of the organization, patients and the nurses employed (Perra, 2000; Fagerström, 2011).

Decision making by head nurses in managing ethical dilemmas

Head nurses spend increasing amounts of their time resolving ethical dilemmas and dealing with issues in managing dilemmas (Kälvemark *et al.*, 2004). Here the issues could be seen through the moral/ethical and the stress perspectives (Jameton, 1993): moral uncertainty, arising when one is unsure what principles or values apply; moral dilemmas, arising when two or more principles or values conflict (more than one principle applies and there are good reasons to support mutually inconsistent courses of action); moral distress occurring when one believes one knows an ethical principle is at stake and also the morally right thing to do, but institutional constraints make it impossible to pursue the desired course of action. Then management of ethical dilemmas requires the head nurse to respect the dignity of each individual, endeavoring to generate the greatest benefit for the patients, employees, stakeholders, health care institution and nursing profession (McFarlane, 2003).

Fenwick (2005) identified three issues with respect to managing ethical dilemmas: "positionality" means the potentially imposing position of the head nurse, creating its own oppression of nursing personnel, patients or their relatives; potential fragmentation of subjectivities is related to head nurses' desires and identities, which reflect circumstances and ideologies, conforming to prevailing managerial images and dominant managerial traditions at the institutional level; contradictions between management theory and practice relates to the gap between the theoretical knowledge and managerial skills of a head nurse in managing ethical dilemmas. Dualities (worker/manager, reflection/experience, individual/organizational) are perpetuated in theoretical studies as health care management orientations that separate the world into fixed positions of manager/leader, practitioner/personnel and consumer (client/patient).

The decision-making process may be described as having two phases such as an exploratory (divergent) and a convergent phase where the focus is to reduce the number of alternatives and then make the decision (Kreitner and Kinicki, 2001; Turpin and Marais, 2004). This is similar to the decision process described in Russo and Schoemaker (2002), consisting of two phases: an expansive (divergent) phase, represented

as creative, where alternative solutions are generated; and a convergent phase, with the approach to ask different units to scope a solution in isolation, or to use multi-disciplinary teams that have different perspectives, to interact with each other.

Decision making is dependent on many factors, so the head nurse needs to understand one's environment, or decision-making context (Russo and Schoemaker, 2002), which includes power relationships between managers and other stakeholders who have different interests and pressures. Conflicts which arise in managing ethical dilemmas involve the parties' awareness of the opposition of goals, values, opinions, activities or power relations (de Reuver, 2006). Head nurses must therefore respond to the contradictory demands and expectations of: employees (nurses) vs the organization; employees vs patients; and employees vs the profession, which can become a precarious balancing act (Toren and Wagner, 2010).

Management structure in health care determines the behaviors, attitudes, dispositions and ethics that create the work culture in which the interprofessional power operates. Where the structure in the organization is more or less hierarchical, with decision-making power centralized at the top, then the management is likely to reflect a lack of freedom and autonomy at the lower levels, e.g., head physician and head nurse on the ward, head nurse and nursing personnel (Sell *et al.*, 2004). Factors that contribute to interprofessional power relations include the way in which health care institutional organization is structured (Hart and Hazelgrove, 2001).

The power in decision making within ethical dilemmas is focussed on three forms of authority – that is legitimate power – command, management and leadership (Grint, 2005). The role of those responsible for decision making is to find the appropriate answer, process and question to address the problem, respectively (Grint, 2008). It does not mean that the correct decision-making process lies in the correct analysis of the situation, but it means that decision makers tend to legitimize their actions on the basis of a persuasive account of the situation (Grint, 2005).

Organizational arrangements such as nurses and physicians being part of different teams, with different responsibilities; the way physicians' work is privileged over nurses' work have a significant influence on the way that physicians and nurses collaborate (Hartley, 2002; Reeves and Lewin, 2004). Both trust and power operate on the basis of the same principle and influence the selection of actions in the face of other possibilities in managing ethical dilemmas (Gillespie *et al.*, 2010; Shagholi *et al.*, 2010). Both allow managers and their personnel to link their mutual expectations with each other and to coordinate (re)actions between them (Bachmann, 2001).

Purpose and research questions

The purpose of the study is to characterize issues related to head nurses' decision making when managing ethical dilemmas.

The object of the study is managerial experiences of head nurses in ethical dilemmas through decision making.

The research questions were:

RQ1. In what situations do head nurses experience ethical dilemmas when they make decisions?

RQ2. What are head nurses' reasons for making particular decisions, what actions do they take when they make decisions, and what are the consequences of head nurses' decision making in ethical dilemmas?

Design

The study is qualitative descriptive (Kylmä and Juvakka, 2007). Inductive conventional latent qualitative content analysis (hereafter "qualitative content analysis") was chosen as the method of analysis, which is used in descriptive studies (Sandelowski, 2000; Graneheim and Lundman, 2004; Elo and Kyngäs, 2007).

In this research the approach of conventional content analysis was used. In conventional content analysis, coding sub/categories derived directly from the text data and theoretical framework are not created before analysis (Hsieh and Shannon, 2005). Empirical qualitative data are the primary and essential background to describe, explain and interpret the findings. Theoretical framework in this method plays a supplementary role and is used in interpretation of findings regarding the research aim (Graneheim and Lundman, 2004). The research team delineated analytic procedures specific to this approach addressing trustworthiness with empirical evidence (Mayring, 2000) drawn from the written reflections by research participants about decision making in ethical dilemmas.

Methodology

Sample

A snowball sampling technique was applied in the study. The sample size was increased until no new insights from the data were generated (Bloor and Wood, 2006).

The following sampling steps were performed (Noy, 2008):

- drafting a participation program (likely to be subject to change, but indicative);
- approaching stakeholders and asking for contacts by finding contact people (those in health care institutions open to research);
- gaining contacts and asking them to participate by explaining to them about the research aim;
- delivering covering letters to the head nurses who were willing to be involved in research so that they would be free to decide about participating in the study;
- head nurses were asked to send an e-mail with acceptance/refusal to participate; and
- continuing snowballing with contacts to gain more stakeholders by necessity.

The total sample was 49 head nurses working on wards in major hospitals and primary health care centers in five major cities in Lithuania.

The research participants were seven head nurses from each of the five major hospitals (total $n = 35$) and two head nurses from each of the seven major primary health care centers (total $n = 14$). All the research participants were women. The work experience in the head nurse's position among the research participants varied from 1.5 to 28 years (mean = 15.72). The educational background varied, and included:

- professional BA in nursing, college level ($n = 15$);
- BA in nursing, university level ($n = 13$);
- $n = 21$ acquired general nursing education in polytechnics;
- $n = 17$ had an MA in nursing, public health, social work, management, education or psychology; and

- $n = 4$ had studied twice at the BA level during their professional careers and acquired two qualifications (e.g. nursing and public health, nursing and psychology, nursing and social work, nursing and education, or nursing and management).

Methods

Data collection

The data were collected in the format of unstructured written reflections (Patton, 2002), i.e. written narratives (Singh, 2008). The data collection with written reflections (narratives) is a single one-off event, with no intention to re-contact the research participants (Corbin and Strauss, 2008). For the study to be replicable, researchers need to monitor and report the analytical procedures and processes as completely and truthfully as possible (Patton, 2002).

Using e-mail as a research tool potentially offered researchers advantages such as easy access to sample participants, low administration costs and unobtrusiveness (Houghton *et al.*, 2003). The primary advantage of this tool is "friendliness" to research participants because they were not constrained to synchronous communication but could respond when and how they felt comfortable. E-mail reduced the problem of interviewer (researcher) effect and status differences between interviewee (research participant) and interviewer (researcher) (Selwyn and Robson, 1998). E-mailed narratives offered the considerable practical advantage of providing "ready-transcribed" data. However, e-mail narratives suffered from a lack of tacit face-to-face communication (Houghton *et al.*, 2003). This linked to the decision of the research team to select the qualitative content analysis as a research method to analyze the qualitative data.

In total, the research team received 49 reflections from 49 individuals. The reflections were classified neither by the type of institution nor by the health care level. The length of written unstructured reflections was between 559 and 1.547 words (mean≈755 words). In total the analyzed text (with all reflections) consisted of 36.985 words. In this study, the researchers did not compare, but rather described, the issues related to decision making in ethical dilemmas handled by head nurses.

Data analysis

The unstructured written reflections (narratives) were analyzed using inductive conventional latent qualitative content analysis (Mayring, 2000; Graneheim and Lundman, 2004; Krippendorff and Bock, 2008) because there is not enough prior knowledge, theories and theoretical frameworks or conceptualizations about the phenomenon. The qualitative content analysis is mainly inductive, grounding the emerged themes and sub/catgories, as well as the inferences drawn from them, in the qualitative empirical data (Graneheim and Lundman, 2004).

The key feature of content analysis is that the many words of the text are classified into much smaller content sub/categories. The sub/categories and themes derive only from the empirical qualitative data (Elo and Kyngäs, 2007) in a process of content analysis. These sub/categories are interconnected with themes (Patton, 2002).

The whole process of analysis was divided into two phases, which were related to the research questions:

Phase 1. The analyses were guided by the following research question "In what situations have head nurses experienced an ethical dilemma in their decision making?" The written reflections were read through carefully. The analysis started by selecting the unit of analysis (Guthrie *et al.*, 2004), which in this research was decided by the research team to be at least one sentence, because a narrow unit of meaning, e.g., one

word may result in fragmentation (Graneheim and Lundman, 2004; Krippendorff and Bock, 2008). The data were coded according to every unit of analysis (called "subcategories 1"), and then the interrelated subcategories 1 were grouped into codes such as subcategories 2. Following which, similar subcategories 2 were grouped together into categories. Finally, the categories were grouped into themes. Subcategories and themes were labeled according to their content. During the analysis, the characteristics associated with head nurses' experiences of ethical dilemmas in decision making emerged as themes (Table I).

The categories framed the content of themes.

Phase 2. In this phase the focus was on the second research question, namely, "What are the reasons, actions, and consequences in the context of decision making in ethical dilemma situations?" Although the themes and categories were created in the second phase, the research team continued the data analysis with the focus on categories only. Then the categories were grouped in each theme into three groups: reasons, actions and consequences in ethical dilemmas when head nurses make decisions.

Theme	Category	Subcategory 2	Subcategory 1	Citations from the original data
[…] Taking the risk in deviating from the formalities, when	Breaking the interprofessional hierarchy by advocating the nurses' competence, which implies	Advocating the nurses' competence by contradicting physicians' opinion decisions as a premise to break the interprofessional hierarchy	Supporting the nurses regarding their opinions that could be contrary to physicians' opinions	"On night shift the nurse refused to give to the patient prescribed medications as she found a mistake in the physician's prescription and informed the physician on call. The nurses reported the situation to me. I discussed this with the head physician on call. All my steps meant that I contradicted the physician's opinion, even in this situation the physician was not right" (Head nurse 1)
			Trusting the nurses' professional competence regarding their decisions concerning patients' situations which could be contradictory to physicians' decisions	"The physician prescribed expensive medication, but the head physician on the ward ordered the nurse to give this medication to another patient as he was a relative of the head physician. The nurse declined by refusing to give the medication to the other patient. I supported the nurse's decision even if it meant that the nurse and I contradicted the physician's opinion" (Head nurse 4)

Table I.
Head nurses' experiences of ethical dilemmas in decision making when they "take risks in deviating from the formalities" – an excerpt from the data analysis

The research team followed the suggestions of Fernald and Duclos (2005), and spent a lot of time discussing a methodological approach to content analysis and the analytical style of narratives, and revising the tentative sub/categories and themes. A process of reflection and discussion in the research team resulted in an agreement about how to name the subcategories, categories and themes.

The data manager (VZ) was responsible for selecting compiled and merged files for analysis and updating the file status and accessibility for all team members. All the analysis files passed through the data manager, and all regular e-mail communications and Skype meetings were her responsibility.

The categorization of data was the major part of the analysis. Every team member independently wrote down definitions of sub/categories and themes, but annotated and revisited them by communicating through e-mails and regular Skype meetings. Every written reflection was discussed with the focus on the main issues that needed to be reflected in sub/categories and themes, and their relationship to the research questions. What differed between the team of researchers was their judgement about what comprised familiar and unfamiliar labels of reasons, actions and consequences. All the electronic communications were important to the analysis process for updating themes, sub/categories, identifying changes and making consensus-based decisions. The re-contacting of the research participants is not required in using the content analysis (Fernald and Duclos, 2005; Elo and Kyngäs, 2007) and in this research the research participants were not re-contacted.

Excerpts from the data were used to increase the trustworthiness of the research data. The research team made sure that informants are not identified by quotes from the data. The internal validity of content analysis was assessed as face validity by seeking agreement between researchers in a team (Graneheim and Lundman, 2004).

Ethics

Ethical approval was received from the Board of the Vytautas Magnus University (Lithuania) (2012-04-16, Protocol No. 7).

Head nurses were guaranteed anonymity and confidential processing of their responses. The head nurses e-mailed their agreements to the researcher (VZ), who explained what the participants were required to do in the research by sending them written information on the research purpose and ethics. All the reflections on experiences of ethical dilemmas were received from the head nurses by e-mail and collected in one file accessible exclusively to the research team. The study was conducted with autonomy, justice, beneficence and non-maleficence and informed consent as the basic principles in nursing research (Richards and Schwartz, 2002).

Findings

The findings answer the research questions and highlight the following aspects:

- The characteristics of situations in which head nurses experience ethical dilemmas when they make decisions are evident in six themes such as taking risks in deviating from the formalities, balancing power and humaneness, maintaining the interprofessional hierarchy, managing resistance to change, managing with limited options, experiencing the decline in nurse's professional and/or human dignity.
- The reasons, actions and consequences of decision making when head nurses manage ethical dilemmas are highlighted through categories under themes (see Table II).

Head nurses' experiences of ethical dilemmas in decision making	Process (by category)		
Theme	Reasons	Actions	Consequences
Taking risks in deviating from the formalities (Head nurses: 1, 4, 5, 19, 21, 30, 43, 44)	Breaking the interprofessional hierarchy by advocating nurses' competence	Acting by exceeding one's authority in the best interests of the patient Taking individual responsibility for risk	Implementing equality-based physician-nurse cooperation in the patient's best interests
Balancing power and humaneness (Head nurses: 2, 3, 10, 11, 23, 31, 32, 33, 35, 48)	Perceiving the gap between applied management and nursing practice	Wielding power as an instrument to influence nurses	Mediating among nurses by developing "a culture of peace" Developing a culture of ethics, respect and cooperation among nurses
Maintaining the interprofessional hierarchy (Head nurses: 6, 7, 8, 12, 13, 20, 24, 38, 45)	Being obedient in accordance with the subordination to physicians Being obedient and loyal to hospital management without support of nurses	Exerting pressure on nurses concerning obedience to hospital management decisions Not discussing decisions of hospital management with nurses	Transferring the responsibility to nurses regarding outcomes
Managing resistance to change (Head nurses: 9, 16, 17, 25, 26, 27, 39, 40)	Observing nurses' silent protest against the implementation of nursing change	Encouraging nurses to empower themselves for learning at work Establishing an atmosphere of competition among nurses	Implementing a culture "from silence to reflection" Implementing a culture of open discussion among nurses
Managing with limited options (Head nurses: 15, 18, 19, 21, 22, 24, 34, 35, 46, 47)	Resisting one-sided decisions of the head physician regarding nursing practice	Encouraging nurses to make an impact on the decisions of the head physician	Encouraging the hidden opposition to one-sided decisions of head physicians among nurses
Experiencing the decline in nurse's professional and/or human dignity (Head nurses: 14, 28, 29, 36, 37, 41, 42, 49)	Experiencing the disparagement of nurse's professional dignity	Encouraging nurses to focus on nursing ethics	Implementing a culture of ethical nursing practice Encouraging nurses' professional self-confidence and respect

Table II.
Grouping categories into reasons, actions and consequences within each theme

Theme 1: taking risks in deviating from the formalities

Head nurses experience issues because their roles in the nursing profession and in leadership compete, and they do not integrate both roles in their decisions:

> I feel right when I make a decision instead of the nurse; when I exclude the nurse from the decision-making, I think this protects her. I act as an advocate of the nurse. I moderate the situation between the nurse and physician or patient. Then there is no conflict. For me it is easier. For me it is always a dilemma. I deviate from the formalities. I have my responsibilities and the nurse has her duties and responsibilities (Head nurse 4).

The reasons to make particular decisions are related to head nurses' administrative power. Through individual actions head nurses take a risk by exceeding their authority

in the organization. Head nurses perceive their administrative actions as an opportunity to enhance nurses' competence and act in the best interests of the patient.

Head nurses relate the consequences of their decisions to improvement of cooperation between the physician and the nurse. Head nurses believe that their moderation through acting instead of nurses in dilemma situations is evidence of physician-nurse cooperation in the patient's best interests:

> The managerial power I use to moderate ethical dilemmas improves cooperation between the nurse and physician. This is the main consequence of my acting instead of the nurse or in the name of the nurse. My every act is evidence that it is possible to implement equality-based physician-nurse cooperation. It is in the patient's best interests (Head nurse 30).

This issue of managing ethical dilemmas highlights that head nurses' decision making is related to situation, and they could experience powerlessness with regard to the welfare of patients, colleagues or organization.

Theme 2: balancing power and humaneness

In organizations with a markedly hierarchical structure, it is hard for head nurses to balance formal power and humaneness, as in a situation of ethical dilemma these may be opposed to each other.

Head nurses encounter dilemmas when they should balance, rather than integrate, their official power and humaneness. Head nurses wield power as an instrument to influence nurses, though they experience moral and psychological discomfort because of this:

> I should use my formal power. I only use it as an instrument to improve nurses' cooperation and to reduce their competition. I experience discomfort, especially moral. I could say this is my dilemma (Head nurse 11).

The reasons are associated with perceptions about the gap between applied management and nursing practice. Actions are performed by head nurses wielding power in order to influence nurses:

> I understand that nurses in our country have no professional power and lack the opportunity to apply leadership skills. We should work by striving for an ethical working culture and respect among nurses. In order to reduce the gap between the applied management and nursing practice I should use my administrative power (Head nurse 3).

The consequences of head nurses' decisions to use their managerial power reflect their struggle to develop an ethical working culture based on respect among nurses.

Theme 3: maintaining the interprofessional hierarchy

Head nurses encounter internal ethical dilemmas when they must adapt the organizational culture in which they have to maintain the interprofessional hierarchy because they care about their personal administrative status in organizations. Head nurses obey hospital management decisions even if the nurses do not support it:

> I do not discuss decisions of hospital management with nurses. These decisions have to be accomplished. Sometimes I must exert pressure on nurses. I am in a dilemma every day. My decisions are always wrong as I am between the nurses who are my colleagues in the profession, and the hospital management, which is my executive (Head nurse 6).

In those situations when head nurses "maintain the interprofessional hierarchy" reasons are related to obedience in accordance with the subordination to physicians

and to hospital management decisions. The actions are implemented through pressure on nurses concerning obedience to hospital management decisions:

> I am always in a dilemma. Should I be loyal to nurses or to hospital management? My answer is clear: 'Yes, of course, to hospital management because we should obey their orders'. I do not expect support from nurses regarding this. I do not discuss the decisions of hospital management with nurses (Head nurse 45).

The consequences highlight that the head nurses are inclined to avoid taking responsibility and leave matters to the nurses' responsibility:

> Nevertheless I require nurses to be loyal to hospital management decisions, but they act as autonomous professionals. Nurses are responsible for outcomes. I feel that I should be responsible too. This is a dilemma. I require what hospital management requires and transfer all responsibility to nurses regarding outcomes (Head nurse 13).

Theme 4: managing resistance to change

Head nurses are participants in change in the organization and are responsible for their implementation on the ward. Our findings show that for head nurses the implementation of nursing changes is an ethical dilemma, as they lack resources, support and autonomy.

The reasons for using administrative power as an instrument are associated with nurses' resistance and "silent protest" against the implementation of changes. Head nurses' actions are implemented through nurses' encouragement to empower themselves to learn from experience at work:

> I observe the protest of nurses to changes. But I do my best to encourage changes in nurses' perceptions by motivating them to learn at work. It means learning from situations, cooperation, problem solving. We should act, reflect and discuss together in order to implement the nursing changes because this is a part of the change in the organization. The dilemma here is to represent the formal administrative power and act in the name of nurses, when they are protesting (Head nurse 39).

Head nurses manage the resistance to change through establishing a competitive atmosphere among nurses:

> In the hospital there are administrative mechanisms which mean that nurses could be motivated by financial support for their non-formal professional development. Also they could receive bonuses for good results in change implementation (Head nurse 26).

The consequences are related to the implementation of cultures of reflection and open discussion among nurses.

Theme 5: managing with limited options

Head nurses in our research declare that their managerial power is limited and they have to act according the orders of the head physician. Often head nurses are in the middle between the physician and nurses within the decision making in ethical dilemmas. Consequently, head nurses encourage the nurses to have an effect on the development of nursing practice:

> My managerial power is limited. I have to act according the orders of the head physician. I experience a dilemma. I am between head physicians' orders and my wish to encourage nurses to be leaders. I encourage hidden opposition among nurses to the one-sided decisions of a head physician (Head nurse 21).

The possible head nurses' actions in management with limited options are to encourage nurses to be active in decisions regarding nursing on the ward. The reason for this action is to affect the decisions of the head physicians:

> My cooperation with nurses is a prerequisite to resist a one-sided decision of the head physician on the ward. Without nurses' participation in decision-making it is impossible to make improvements in nursing (Head nurse 22).

The consequence is for head nurses' influence on nurses to be open-minded and to maintain the hidden opposition to one-sided decisions of head physicians on the wards.

Theme 6: experiencing the decline in nurses' professional and/or human dignity

The decline in nurses' professional and human dignity is associated with head nurses' experience that nurses' professional dignity is decreasing. Therefore head nurses try to implement a culture of ethical nursing practice and to enhance nurses' professional self-confidence and respect. Thus head nurses encourage nurses to focus on nursing ethics:

> We live in a country where nursing is denigrated. When I ask them to be ethical and strive for the highest quality standards in nursing I am in a dilemma. On the one side is the organization in which nursing is denigrated; on the other side are nurses, who experience disrespect for their profession, and I am in the middle with demands for ethics and quality (Head nurse 41).

Head nurses act by encouraging nurses to focus on nursing ethics in order to restore the authority of nursing. The reasons for these actions are also related to the maintenance of professional dignity. Then the consequences are based on head nurses' endeavors to implement a culture of ethical nursing practice and enhance professional self-confidence. Head nurses see ethical nursing as a prerequisite for increasing the authority of nursing in society and in health care organization.

Discussion

The findings characterize issues related to head nurses' decision making in ethical dilemmas. These issues manifest a variety of aspects such as the head nurse's role, the decision-making process, and power relations in the organization of health care.

Taking risks in deviating from the formalities

A centralized health care management structure with medical power and authority at all levels is hierarchical (Gillespie *et al.*, 2010). Our research findings demonstrate that head nurses' roles in decision making are interrelated with the organizational structure and interprofessional power, emphasizing the nurse-physician relationship with the dominance of the medical power. Nugus *et al.* (2010), Greiciene and Petronyte (2013) results also manifested the similar idea that interprofessional power relationships in health care settings are terse and unidirectional, and collaboration by autonomous clinicians is selective, happening on a case-by-case basis, largely at the discretion of medicine. The patterns that constitute such power have been framed as "medical dominance."

Managerial authority is often in conflict with the head nurse's sense of professional integrity (de Raeve, 2002). Our findings demonstrate that head nurses should be obedient to executives in organizations, but they take an individual risk by acting in ways that are contrary to interprofessional obedience-based organizational culture. This ethical dilemma is related to the contradiction between head nurses' moral courage to act on behalf of patients, the nursing profession and the organizational culture.

Head nurses encounter dilemmas in situations where their ability to do the right thing is frequently hindered by conflicting values and beliefs of other health care providers (LaSala and Bjarnason, 2010).

Balancing power and humaneness

Nurses in Lithuania work in a stereotyped organizational culture, where they are seen as skilled workers (Greiciene and Petronyte, 2013). Nevertheless, a head nurse is responsible for keeping in line with the organizational requirements as regards the cooperative and ethical working culture of nurses.

Nurses are unmotivated to implement new approaches and they focus on usual day-to-day routine practices and often on the individual work performance (Jankauskiene *et al.*, 2007). Then the head nurse's issue is to manage this situation. S/he experiences ethical dilemma, which incorporates, according to Jameton (1993), moral uncertainty, moral dilemma and moral distress, because s/he is unsure what principles or values apply by being head nurse, representing both nursing practice and management. But a head nurse needs to be decisive, because living with uncertainty in a convergent phase (Russo and Schoemaker, 2002) by postponing decisions until the last moment, results in her/his isolation on the ward (Turpin and Marais, 2004).

Head nurses use personal strength to foster an ethical culture, respect and collaboration in the organization. This is an heuristic device to enable us to understand why those charged with decision making sometimes appear to act in ways that others find incomprehensible (Grint, 2005). Reeves and Lewin (2004), Clunie (2006) also claim that leaders have a lifelong responsibility to foster the same attitude in others and by modeling behaviors head nurses can encourage others to do the same.

Head nurses use their formal power as a tool to influence nurses. They understand that wielding power is risky, and humaneness in this context is not integrated. These findings corroborate the idea of Lindholm *et al.* (1999) and Tsai (2011) that power in nursing management is related to activities, formal position in the organization and freedom to act, but the professional group associates power only with professional needs and interests.

Maintaining the interprofessional hierarchy

The way a health care institution allocates power and authority determines how employees behave. These choices manifest in an institution's organizational structure, which is the way an institution arranges its management and lines of authority. It determines roles, responsibilities and the flow of information within the institution. Decision making within ethical dilemmas also results from those decisions (Gillespie *et al.*, 2010; Pieterse *et al.*, 2011).

The research findings highlight the dilemmas when head nurses are pressed to maintain the interprofessional hierarchy and are constrained by organizational culture to be obedient to executives. Interprofessional power relations are the issue for head nurses in managing ethical dilemmas. This dilemma raises questions about head nurses' options to maintain nurses' well-being, and at the same time fulfill their obligation to the conflicting demands of the organization (Toren and Wagner, 2010).

The existing repressive management in organizations, and the limited options of head nurses to empower nurses to participate in decision making, do not establish premises for head nurses to maintain an interprofessional culture based on equality. For head nurses this means taking the role of moral leaders. This may be risky in terms of keeping one's own working position in the organization. In this organizational

context head nurses experience potential fragmentation of subjectivities, such as a gap between a head nurse's desires and identity (Fenwick, 2005), which reflects dominant managerial traditions in institution.

Findings show that head nurses experience the issue in respect of limited opportunities to apply general attributes that are needed in decision making such as judgement, integrity, courage and humanity. Instead of these four attributes, a head nurse has the possibility to apply only one – humanity. Our research findings add to the meaning "humanity" by Holian (2006) that a head nurse within a health care organization with medical dominance is forced to experience interprofessional power in which s/he must understand, forgive and appreciate lack of power in decision making within ethical dilemmas.

Managing resistance to change

Since the concept of "power" involves power over another person, the use of power can lead to resistance. A head nurse's managerial position on the ward implies authority in the broadest sense of the word, and not simply the power to wield the stick (Tsai, 2011). However, not all attempts at influence result in resistance. In change processes power and influence can equally well lead to compliance (Grint, 2008).

In our research, head nurses experience that changes are implemented in the context of the multiple realities (Kan and Parry, 2004). In this complex context head nurses experience the ethical dilemmas as they are "in the middle," between the orders of executives and nurses with no means to participate in decision making. The research participants reported that the success or failure of changes depends on whether professionals accept or resist their implementation, as noted by Lapointe and Rivard (2006). In such an atmosphere head nurses experience issues in managing ethical dilemmas because resistance arises among nurses.

A central role of a head nurse on the ward is to create the conditions in which nursing personnel can find their voice and express it (Kriukelyte *et al.*, 2005). Head nurses need to understand that each nurse expresses diverse perspectives, and through that the innovative thinking emerges. Only in such an environment can nurses take risks in their thinking, share their ideas, and together come up with new insights that no one person would have reached by thinking alone (Rozenthuler, 2013). Head nurses experience issues of positionality, which is their potentially imposing managerial position by creating its own oppression of nurses (Fenwick, 2005), when they are resistant to change.

Our research showed that nurses oppose the implementation of changes in nursing on the ward, continuing education and professional development because of heavy workload, and a lack of time and resources. This is the core barrier that prevents them from making learning a priority. This outcome shows the reality of nursing practice where nurses are physically and mentally exhausted and have no motivation to be a part of change (Nilsson *et al.*, 2001; Jankauskiene *et al.*, 2007).

Managing with limited options

Health care organizations are increasingly dependent on competent nurse managers (Contino, 2004), who are responsible for the provision and development of quality care (Hader, 2011). Our findings contrast with this idea because health care organizations in Lithuania appreciate only the physician's competence and attribute the quality of care to this. This atmosphere creates ethical dilemmas for head nurses as they are torn between two facets in their actions. In the head nurses' position "internal" (moral) and "external" (managerial) considerations compete for on head physicians' decisions.

Head nurses see the possibility to influence decision making through cooperation with nurses. Decision making in ethical dilemmas is often a cooperative act, rather than that of a single individual (Jakstiene and Jonaitiene, 2005; Liubarskiene, 2007). To maintain management of an ethical dilemma head nurses need to trust the personnel and be able to encourage and support nurses to participate in decision making (Reeves and Lewin, 2004).

Our research participants encourage nurses to seek to influence head physicians' decisions. With such actions they create the hidden opposition among nurses to the one-sided decisions of head physicians. This strengthens cooperation and professional power. In other words, the head nurse as a powerful actor does not simply make the assumption that the subordinates (nurses) will comply with what s/he wants her/him to do (Bachmann, 2001).

This issue shows that the purpose of organizational power in health care organization is to prevent nurses from participating in decision making and to obtain their passive agreement to the situation, described by Gaventa (Sadan, 2004) as a silent agreement in conditions of glaring inequality. Such silent agreement is not a manifestation of nurses' intentions not to participate, but evidence of a mute compliance with the situation.

Experiencing the decline in nurses' professional and/or human dignity

A head nurse experiences the issue not only because of the dual roles of nurse and manager, but also because of being in both roles within an institution. It manifests contradictions between theory and real working culture (Fenwick, 2005) in a health care institution. Our research shows that a head nurse, in her/his managerial practice, experiences a gap between competence and the opportunity to apply competence in managerial practice. Nevertheless, head nurses act intuitively by understanding the organizational environment, communicating with nurses and encouraging them to participate in decision making. Such moral and psychological support, according to Courtney, Kreitner and Kinicki (2001) influences the development of new solutions in decision making within management of ethical dilemmas.

Head nurses encounter issues in patient care and perceive limited respect for their work (Ulrich *et al.*, 2007). Our research findings highlight that head nurses observe the disparagement of nurses' professional dignity in the organization and in society. Nevertheless, in this quite complex health care context, which manifests limited respect for nursing, head nurses encourage nurses to act ethically.

Nurses experience dignity when they work in a culture of honesty, trust, respect and loyalty (Zydziunaite, 2004; Miller, 2006). In our research head nurses relate ethical nursing to respect by virtue of honoring someone and experiencing dignity by caring for others. Nursing cannot be detached from respect as it is behavior, which cannot be achieved without endeavoring to develop professional and human dignity (Thomas *et al.*, 2003; DeCelle, 2009; Butenas and Zydziunaite, 2013).

Research limitations

The first limitation relates to the technique of data collection, where reflections in written form were preferred to semi-structured interviews. However, the researchers were unable to contact the participants directly and to ask additional questions. Such a decision was based on the assumption that the quantity of the qualitative data obtained did not replace the depth to be achieved when a respondent

felt free to narrate the story without any framework determined by the researcher (Sjolander *et al.*, 2011).

The second limitation was of a linguistic character: all the reflections, as well as its analysis and the abstraction of the qualitative data, were produced in a language other than English. All the material was translated into English by two professional linguists to ensure the validity of the qualitative data translation. However, it was not always possible to convey the content of the ideas in both languages in an identical way. Translators are not perfect machines, but individuals who have certain skills, which allow them to translate from one language into another (Campbell, 1998). Translators in this research were English language specialists, but not familiar with the context of health care and nursing management. Their translations were linguistically and lexically correct, but often missed the sensitivity to the context of the situations in the narratives. Research team and translators had difficult discussions on the qualitative themes such as "Taking risks in deviating from the formalities," "Managing with limited options" and "Experiencing the decline of nurse's professional and/or human dignity." A consensus between translators and researchers was achieved. But the research team considered that it would be interesting for future research to be more focussed on these three mentioned themes and to re-contact the research participants for semi-structured interviews.

Practical and social implications

The study adds to the understanding of issues of the management of decision making in ethical dilemmas. It is an ongoing systematic process that encourages head nurses to learn from practice and manage the quality of care by empowering themselves and nurses to take responsibility for leadership. The decision making in ethical dilemmas is related to professional development in nursing leadership with the focus on contextual, situational and interprofessional considerations.

The premises for decision-making success could be equality-based interprofessional cooperation and teamwork, reflection and learning at work in order not to perpetuate an authoritarian culture in the organization. Our data indicate that power is a competency that can be viewed as positive, productive and cooperative, and interprofessional power-based interactions within health care in the Lithuanian setting are constructed from a range of planned and ad hoc activities for a variety of purposes in making decisions in managing ethical dilemmas, and which involve the need for the participation of physicians and nurses as equal competent professionals.

Empirically, the study provides an analysis of the way power is exercised in relation to issues that are met in managing ethical dilemmas, which head nurses may encounter on the ward in health care organizations, and also the reasons, actions and consequences that could be used as components in decision making. Our research findings suggest that work relationships characterized by trust may strengthen cooperation, reduce conflicts, and diminish the tendency to compete and dominate. When managerial power is transformed into encouragement and support for subordinates, then they have the opportunity to take advantage of the ability to empower themselves to participate in decision making and to influence it. Given this possibility, head nurses on the wards need to work out whether nurses would be able to participate in self-empowerment without external influence. Managers on the ward, such as head nurses and head physicians, need to trust the competence and commitment of nurses and to invite them to participate in the decision making when managing ethical dilemmas.

Conclusions

Head nurses make decisions in complex ethical dilemmas in which nursing, nurses' competence and self-confidence, organizational structures, interprofessional cooperation and leadership are directly involved.

The issues of head nurses' decision making when managing ethical dilemmas are related to contexts that reflect the attitudes of society, the health care system and health care organizations toward nursing management and leadership. These issues reveal the gap between societal expectations and the opportunities to implement nursing management in health care organizations.

The reasons, actions and consequences among head nurses facing ethical dilemmas are oriented toward patients and their relatives; nurses and nursing practice; interprofessional cooperation and teamwork; leadership and empowerment; quality of care; respect and professional dignity; learning and competence. All these characteristics should be an integral part of state health care policy and organizational culture in nursing management, leadership and practice. By ignoring those, head nurses are limited in their decision making, and experience constraints on their autonomy in leadership, as they are expected to be obedient to the informal interprofessional hierarchy and the vertical subordination in the health care organization. This causes head nurses to act as obedient performers according to the orders of head physicians and the management of health care institutions.

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Appendix. Instruction for research participants

Dear head nurse,

We kindly invite you to participate in research with the purpose to study the issues related to head nurses' decision making when managing ethical dilemmas.

The concept "ethical dilemma" in this research is used to refer to circumstances when a choice has to be made between two equally unsatisfactory alternatives.

We kindly ask you to reflect on situations in which you had experienced an ethical dilemma with the focus on *issues,* and your leading in the decision-making *process* within it.

We hope that the following questions will be useful for your reflection:

- In what situations you experienced ethical dilemmas when you made decisions?
- What were reasons for making particular decisions, what actions did you take when you made decisions, and what were the consequences of your decision making in ethical dilemmas?

You are not asked to reflect exactly on the ethical dilemma situation regarding the organizational context within your work.

You are not asked to discuss sensitive topics regarding your superiors and the wider administrative systems and organizational hierarchies.

You are free to choose the situation or case from your experience in health care institution and to narrate it in a written format, and to send it by the following e-mail: v.zydziunaite@kic.vdu.lt

Your participation in this research is voluntary.

You have the right to withdraw at any time. All your responses (narratives) will be kept confidential. Any report of the data collected will be in summary form, without identifying individuals.

Without your assistance, much of the research not be possible.

We hope that your participation will be a mutually beneficial experience.

Thank you. Research team.

*Routine questions about participation in the research you can direct to the research leader by the following e-mail: v.zydziunaite@kic.vdu.lt

**Any ethical questions should be addressed to the representative of Ethical Committee at Vytautas Magnus University by the following e-mail: dek@smf.vdu.lt

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International Nursing Review

Leadership styles in ethical dilemmas when head nurses make decisions

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ZYDZIUNAITE V., LEPAITE D. & SUOMINEN T. (2013) Leadership styles in ethical dilemmas when head nurses make decisions. *International Nursing Review* **60**, 228–235

Background: The overlooked aspect in Lithuania is the dearth of leaders among head nurses, who bear the responsibility for decisions in ethical dilemmas. Understanding the application of leadership styles is fundamental to ensuring head nurses' abilities to influence outcomes for healthcare providers and patients.
Aim: To identify the leadership styles applied by head nurses in decision making in ethical dilemmas on hospital wards.
Methods: The data were collected by questionnaires completed by head nurses ($n = 278$) working in five major state-funded hospitals in each of the five regions of Lithuania. The data were analysed using SPSS 16.0, calculating descriptive statistics and analysis of variance.
Findings Head nurses apply democratic, affiliative, transformational and sustainable leadership styles when resolving ethical dilemmas. The application of leadership styles is associated not only with specific situations, but also with certain background factors, such as years of experience in a head nurse's position, ward specialization and the incidence of ethical dilemmas. Nurses having been in a head nurse's position over 10 years use primitive leadership styles, notably bureaucratic leadership, more often than do those head nurses with only a few years of experience in such a position.
Conclusions: The results highlight the need for head nurses to reflect on their practices and to find new ways of learning from practice, colleagues and patients. Head nurses' managerial decisions due to their 'executive power' can turn into a new state-of-the-art leadership in nursing.

Keywords: Ethical Dilemma, Head Nurse, Leadership Style, Leadership Type, Lithuania, Nursing Management, Statistics

Background

Nursing in the Lithuanian healthcare system is still not recognized as a system based on service, with leadership as a key component (Health Care in Lithuania: Help Yourself 2012). The leadership role of head nurses in the hospital or ward context suffers due to the professional power of physicians and lack of public trust in the nurse's profession (Mazioniene & Zydziunaite 2009). However, the Law on Nursing and Midwifery Practice of the Republic of Lithuania (2001) makes it clear that nurses need to act as leaders to perform their duties and responsibilities.

Nursing leadership is a major issue at all levels of nursing in Lithuania, and there is a scarcity of nursing staff. A regrettably

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overlooked aspect is the dearth of leaders among head nurses, who bear the responsibility for decisions in various contexts and situations (Health Care in Lithuania: Help Yourself 2012). In Lithuania, head nurses on the ward are subordinate to the head physician on the ward and also to the head nurse of the hospital. The term 'head nurse on the ward' is equivalent to the term 'middle manager' in management or 'head nurse' in nursing management and refers to the nurse (formal) leader responsible for the supervision and management of the administrative and clinical aspects of nursing.

Internationally, head nurses are known to encounter ethical dilemmas which they find difficult to identify and articulate. As a problem an ethical dilemma lacks a satisfactory solution. The problem in ethical decision making is that very different ethical choices regarding the same ethical dilemma may result in neither choice being a 'right or wrong' decision (Bandman & Bandman 2002). Ethical dilemmas are workplace stressors known to impair the quality of nursing (Silen et al. 2008). Unresolved dilemmas can cause feelings of frustration and powerlessness and hence compromises in patient care, job dissatisfaction, disagreements among healthcare teams and even burnout (Cohen & Ericson 2006). Head nurses' responsibility in ethical dilemmas is to facilitate a safe and ethical working environment in which nurses are able to give their patients quality care.

However, head nurses' ethical responsibilities in ethical dilemmas affect not only patients but also the patients' relatives, nurses (Toren & Wagner 2010), the organizational culture (Rad & Yarmohammadian 2006), physicians (Xirasagar et al. 2005), decision making and conflict resolution (Frankel 2008). Head nurses as decision makers need to be conscious of the pitfalls associated with inappropriate leadership styles leading to inadequate decision making within ethical dilemmas (Winston 2005).

A leadership style is a leader's style of providing direction, implementing plans and motivating people (Martindale 2011). Internationally, researchers present a variety of leadership types and styles. In this article, we apply the four leadership types described by Woods (2010) and Kelly (2010) incorporating different styles, namely, (i) *primitive leadership* type, characterized by an autocratic, *laissez-faire*, bureaucratic styles usually hierarchical with one dominant individual impervious to challenges from subordinates (Woods 2010); (ii) *paternalistic leadership* type characterized by a coaching (supervisory) and charismatic styles highlighting leaders with strong personalities whose confidence dispels group anxiety due to lack of strength and confidence (Kelly 2010); (iii) *modern leadership* type characterized by a democratic (participatory) and affiliative (particular) styles showing respect for others' opinions and their inclusion in decision making (Kelly 2010); (iv) *thought leadership* type characterized by a sustainable, authoritative (expert) and transformational styles based on an ability to develop and promote new ideas leading to creativity (Woods 2010).

The international literature on nursing management describes various leadership styles without relating them to types. For example, the *laissez-faire* style is destructive leadership conducive to workplace stress, bullying at work and psychological distress, role conflict and ambiguity, conflicts with co-workers (Skogstad et al. 2007) and passivity (Mester et al. 2003). Coaching (supervisory) style has a positive effect on communication and teambuilding (Frankel 2008). Head nurses using an affiliative style create a friendly work environment and attempt to prevent strife (Cleary et al. 2011). The application of coaching and affiliative or democratic leadership styles enables head nurses to empower nurses to be active participants in decision making (Cummings et al. 2005; Luna & Jolly 2008; Vesterinen et al. 2009). The application of charismatic leadership is associated with less burnout and more emotional stability among nurses compared to autocratic leadership (Adams et al. 2009). Transformational leadership style is applied more often than others as this style shapes and alters the goals and values of other staff to achieve a collective purpose to benefit the nursing profession and the employers (Failla & Stichler 2008). Sustainable leadership encourages nurses towards professional development and facilitates human resources (Connaughton & Hassinger 2007). According to Sellgren et al. (2008), authoritative (expert) leadership implies that head nurses' need confidence to articulate nursing values in decision making.

Most Lithuanian research in the nursing field so far concerns practice more than leadership, ethical dilemmas and decision making in nursing management or practice. Some studies have been presented on physicians and the practical value of ethics (Liubarskiene 2007) and patient confidentiality (Liubarskiene et al. 2004) in health care. From these, it is evident that research with leadership issues and head nurses among the key actors is in its infancy in Lithuania.

The items listed above do not address the application of leadership styles in ethical dilemmas, but rather, the leadership styles used when head nurses make decisions.

International research shows that background factors also contribute to nursing leadership styles in ethical dilemmas and are fundamental to ensuring a future supply of nursing leaders who can positively influence outcomes for healthcare providers and patients (Cummings et al. 2005). Several authors discuss the relationships of background factors associated with leadership styles in nursing, such as gender, age, education and work experience. According to Mandell & Pherwani (2003), female

leaders were more transformational than male leaders, while according to Eagly et al. (2003), male leaders were generally more likely to manifest *laissez-faire* leadership. The literature provides evidence that leadership styles are related to age: older and younger managers apply autocratic, bureaucratic, *laissez-faire*, democratic or transformational leadership styles to approximately the same extent (Oshagbemi 2004; Sanchez McCutcheon et al. 2009).

The leadership style variable is relatively closely related to leaders' level of education, years in the position and years of experience (Lok & Crawford 1999). Higher educational level is associated with leadership styles that involve human interaction and encourage the application of participative decision-making processes such as democratic, sustainable or transformational (Politis 2001). Correlations have been found among positive workplace management initiatives, style of transformational and democratic (participative) leadership and higher education levels of head nurses (Tomey 2009). Higher transformational leadership style scores tended to co-occur with higher educational qualifications among head nurses (Dunham-Taylor 2000). Sellgren et al. (2008) note the correlation between higher work position and authoritative leadership style. However, there has been a lack of research on the preferences of head nurses for decision making in particular ethical dilemma situations in which they make decisions that are never optimal for all concerned. The literature does not indicate the relationships between ward specialization and leadership style or between incidence of ethical dilemma and the style applied. No researchers in either the international and Lithuanian contexts analyse the associations of leadership styles and decision making in ethical dilemmas.

We therefore pose the following research questions: What leadership styles do head nurses apply in ethical dilemmas? How background factors are associated with the head nurses' leadership styles in ethical dilemmas?

Aim

The aim of the study is to identify the leadership styles applied by head nurses in decision making in ethical dilemmas on hospital wards.

Sample

The respondents were 278 head nurses working in five major state-funded hospitals in each of the five regions of Lithuania. All respondents were women.

The total population of head nurses in these hospitals is 344. Statistically, the sample size was calculated so as to be representative of the population with 5% standard error and 95% confidence level. The required sample size estimated by power analysis was 182 subjects.

The head nurses had acquired their nursing qualifications at high medical schools[1] (38.5%) and at colleges (22.3%). At universities, 28.8% of the head nurses acquired a bachelor's degree in nursing, social work, public health, epidemiology, midwifery or education and 9.7% had completed master's studies in nursing, public health, education or midwifery. The research participants represented 21 specializations including palliative medicine and care, midwifery, gynaecology, radiology, diagnostics, rehabilitation, neurology, etc. Most of the head nurses were working in general medicine (25.9%), surgery (20.5%), psychiatry (12.2%), paediatrics (7.2%), intensive medicine and care (6.1%). Their age mean was about 31 years and experience in administrative positions about 4.46 years (see Supporting Information Table S1).

Methods

Data were collected by statistically validated questionnaires distributed to 344 head nurses in five major hospitals. The response rate was 83%. The Statistical Software Package for Social Sciences version 16.0 for Windows (SPSS Inc., Chicago, IL, USA) was used to process the data obtained during the research. The internal consistency and reliability of the questionnaire was tested with Cronbach's alpha. The level of statistical significance set for the analysis of the data was $\alpha = 0.05$. The descriptive statistics, such as frequencies, means (arithmetic mean of a sample) and standard deviation (SD; variation or dispersion from the mean; Moore & McCabe 2003) were calculated to estimate the leadership styles actually used in ethical dilemmas.

Analysis of variance (ANOVA) as a parametric statistical technique (Polit & Beck 2008) was applied to determine differences between and among researched groups and to confirm the differences in leadership styles applied among head nurses according to their background factors.

A *post-hoc* power analysis (using G*Power 3 software, Heinrich-Heine University, Dusseldorf, Germany) power ($1-\beta$) of ANOVA was conducted completion of the study in order to determine what the power was in the study, assuming that the effect size in the sample was equal to the effect size in the population (Polit & Beck 2008).

Tools

The original © Zydziunaite, Suominen, Astedt-Kurki, Lepaite, 2011 questionnaire on *nursing leadership when making decisions*

[1]The High Medical School in Lithuania is equivalent to polytechnic internationally. This type of educational institution in Lithuania existed until year 2001.

in ethical dilemmas was used. The instrument consisted of 37 questions in total and was oriented to the study population of head nurses.

The responses to 22 questions were measured on a Likert-type scale ranging from 1 (totally disagree) to 5 (totally agree). In eight questions, the respondents could choose one or more options related to one statement/item (e.g., item '*Head nurse's experience of social pressure from . . .*' and responses '*patient/patient relatives, nurses, head physician on ward/physicians/organization management*'). One question was open ended.

The sections of the instrument were background, reasons for decision making in ethical dilemmas, leadership styles-based actions for decision making in ethical dilemmas and impact of leadership styles-based actions. Here, we address actions and their connections to the background factors.

Background information included respondents' gender, educational level, years of working in present administrative position, level of healthcare organization, healthcare specialization of the department, etc., with seven questions and 31 statements/items. In the background questions, the respondents could choose one statement/item.

The 'actions' section concerns different leadership types with styles such as *primitive leadership* type (12 items) with autocratic, *laissez-faire*, bureaucratic styles; *paternalistic leadership* type (eight items) with coaching (supervisory) and charismatic styles; *modern leadership* type (eight items) with democratic (participatory) and affiliative (particular) styles; *thought leadership* type (12 items) with sustainable, authoritative (expert) and transformational styles). In the 'action' section, all items were measured on a Likert-type scale ranging from 1 to 5 (see Supporting Information Table S2).

The Cronbach's α-values were 0.603 to 0.905 (see Supporting Information Table S2). The reliability statistics of the questionnaire were as follows: Cronbach's $\alpha = 0.976$; Cronbach's α based on standardized items = 0.976; mean $\pm$ SD = 622.51 $\pm$ 75.69; $P \leq 0.000$.

Ethical considerations

An ethical statement was received from the Board of the Vytautas Magnus University (2011-08-26, Protocol no. 9) that the study was ethically acceptable and could be conducted. Written permission to carry out the investigation was granted by the general directors or vice directors for nursing in all five hospitals. The head nurses participated in the research on a voluntary basis. They were guaranteed anonymity and confidential processing of their responses. The questionnaire was voluntarily and anonymously answered with no possibility of the research participants being identified. The study was conducted with autonomy, justice, beneficence and non-maleficence and informed consent as the basic principles in nursing research (Parahoo 2006).

Results

The *post-hoc* power analysis (using G*Power 3 software) shows that the power (1-β) of ANOVA varies from 0.907 to 0.999 and effect size *f* varies from 0.249 to 0.391. Thus the probability of not committing a type II error is over 0.9%. The significant differences could then be interpreted in the study sample and a summary of the results presented.

Verification of normality with the one-sample Kolmogorov–Smirnov test showed that none of the variables related to leadership styles showed normal distribution. Friedman's test results ($\chi^2 = 799.9$; d.f. = 9; $P \leq 0.000$) and one-way blocked ANOVA results highlighted significant differences regarding application of leadership styles. Outcomes of descriptive statistics showed that the head nurses mostly applied modern leadership type with democratic and affiliative styles, likewise thought leadership type with transformational and sustainable styles when making decisions in ethical dilemmas (see Supporting Information Table S3).

The one-way one-factor ANOVA (dispersion analysis) results showed no significant differences in age groups regarding application of leadership styles. Head nurses aged 51 and over rarely applied paternalistic type with coaching (supervisory) leadership style and modern type with democratic style. In the age group from 20 to 30 years head nurses experimented with the following leadership styles to approximately the same extent:

- primitive type of leadership such as autocratic, bureaucratic, *laissez-faire*;
- paternalistic leadership, which includes coaching and charismatic styles; and
- authoritative leadership, which represents the thought type.

This tendency decreased after age 31: primitive leadership type was not popular among head nurses except for bureaucratic leadership style, which occurred in all age groups. Nor were there any significant differences as regarding educational level: paternalistic leadership type with coaching style was applied rarely by head nurses with high medical school (professional level) education. But this style was popular among head nurses with bachelor level education when resolving ethical dilemmas. Head nurses with university-level bachelor's and master's degrees most often applied modern leadership type with affiliative style and nurses with college and high medical school education generally applied modern leadership type with democratic style.

Leadership styles differed significantly across groups of head nurses according to years of experience in a head nurse's posi-

tion on a ward, when they made decisions on ethical dilemmas (see Supporting Information Table S4):

- Primitive leadership type with bureaucratic style was often applied by those with over 21 years of experience;
- Paternalistic leadership type with coaching and charismatic styles and thought leadership type with sustainable and authoritative styles were popular among head nurses with 16 to 25 years of experience;
- Modern leadership type with affiliative style and thought leadership with transformational styles were applied in the group with 16–20 years of experience;
- Modern leadership type with democratic style was applied when head nurses were starting out on their administrational careers (1–3 years of work experience) and when they had 16–20 years of experience;
- Primitive leadership type with *laissez-faire* style was applied when head nurses had 3–5 or 21–25 years of experience.

It is evident that years of experience in administrative work of head nurses is related to core style such as transformational – up to 1 year; democratic – 1 to 3 and 16 to 20 years; affiliative – 3 to 10 years; democratic and/or affiliative styles – 11 to 15 years; democratic and/or sustainable, and/or authoritative – 21 to 25 years; democratic and/or sustainable – 26 to 30 years.

The results show significant differences between ward specializations when head nurses make decisions in ethical dilemmas and apply the following leadership, namely, paternalistic leadership type with charismatic style, modern leadership type with democratic and affiliative styles, and thought leadership type with sustainable, authoritative and transformational styles.

The research outcomes also highlight that modern leadership type with democratic style was topical in every ward specialization; modern leadership type with affiliative style was not so relevant on paediatric wards; paternalistic leadership type with charismatic style was expressed more on general medical wards. On intensive medicine and care wards the head nurses did not apply one substantial style in ethical dilemmas and they chose between democratic, affiliative, sustainable, authoritative and transformational styles (see Supporting Information Table S4).

The statistical data shows that the application of primitive leadership type with autocratic and bureaucratic leadership styles is dependent on the incidence of ethical dilemmas – the more often head nurses faced ethical dilemmas, the more often they applied these styles. From the results, it also is clear that head nurses applied paternalistic leadership type with charismatic style generally when facing ethical dilemmas once a month and authoritative style could be applied when facing dilemmas several times in a day or one per month (see Supporting Information Table S4).

Discussion

The discussion is structured around the findings reported above. Head nurses reported applying many leadership styles, but normally, they had one that they used more than the others when making decisions in ethical dilemmas. Unfortunately, the findings of the present research do not confirm the statement by Frankel (2008) that thought leadership type with transformational style is applied more often than other styles in nursing. Nevertheless, these styles, according to the results of our research, were used less than others, such as democratic and affiliative (see Supporting Information Table S3), which head nurses frequently applied in ethical dilemmas. The difference between our findings and those of Frankel could be explained by research specificity, as many researchers studying leadership styles do not focus on ethical dilemmas and study other aspects, such as the need to develop senior nurses' competencies in leadership styles (Frankel 2008) or staff perceptions of managers' leadership styles (Failla & Stichler 2008).

The findings of the present research show that head nurses generally applied modern leadership type with democratic style when resolving ethical dilemmas. This result corroborates the idea of Luna & Jolly (2008) that democratic style is situational, forges consensus through participation and encourages input in decision making.

Our findings indicate that head nurses from older age groups such as those over 51 years old generally applied primitive leadership styles, but the same tendencies were also seen in all age groups from the youngest to the oldest. Oshagbemi (2004) found that younger and older age groups of managers practised primitive and paternalistic leadership to approximately equal extents, which our findings corroborate.

The findings of the present study partly support the findings of Sanchez McCutcheon et al. (2009), who state that the application of thought leadership with transformational style is related to older age groups of head nurses. Our results showed that transformational leadership was used to approximately the same extent by three age groups of head nurses, namely, 20–30, 31–40 and 41–50 years old. The same age groups also actively practised paternalistic leadership type with coaching style and modern leadership type with democratic and affiliative styles. Such results support the notion of Oshagbemi (2004) that these three styles promote thought leadership with transformational style because they motivate and involve staff in decision making.

Our results showed that the primitive leadership type with bureaucratic style was used equally in all age groups. Such phenomena are not discussed in the literature, possibly due to the national context in nursing management and practice. In all health care in Lithuania (as a former soviet country), head

nurses have no autonomy and their work primarily entails accomplishing assignments from the head physician on the ward and unquestioning compliance with hospital management decisions. Thus, head nurses may accept the primacy of primitive leadership type with autocratic and bureaucratic styles and choose to apply at least bureaucratic leadership style.

The results of the present study do not support the findings of Dunham-Taylor (2000), Politis (2001), Tomey (2009) that higher educational level is related to the application of modern leadership type with democratic style, and thought leadership type with sustainable and transformational styles. The findings of the present study indicate that these styles are more popular among nurses with vocational college-level education. Head nurses with bachelor's degrees use leadership styles to approximately the same extent as head nurses with college-level education. Having a master's degree did not affect the head nurses' choice of leadership style. This could be explained methodologically: head nurses with master's degrees are rare in the sample. This could also be because there is no scope to systematically or contextually implement the knowledge and skills acquired through higher education.

The findings of the present study do not contradict the results of Sellgren et al. (2008) and show that the more years of experience head nurses have in administrative positions the more often they apply thought leadership type with authoritative style. These findings show that more experienced head nurses with authoritative style motivate people during stressful periods and create harmony and build emotional bonds based on loyalty and trust (Luna & Jolly 2008). Huber et al. (2000) state that leadership styles can be seen as different combinations of tasks and transaction behaviours that influence people in achieving goals. Our study shows that bureaucratic style was more popular when head nurses had experienced no changes in their professional positions for about two decades. These findings manifest the head nurses' conformity to the system through the decades.

Modern leadership type with democratic style is mentioned in our research as topical and this supports the ideas of Luna & Jolly (2008) that applying this style head nurses regularly make decisions or take part in decision making. This could mean that head nurses are also focused on nursing staff ideas and thoughts in order to empower them to participate in decision making (Vance & Larson 2002) and to make visible their input Vesterinen et al. (2009). It is also evident from our research that head nurses on all types of wards choose one of several styles, such as charismatic (paternalistic leadership type), democratic and affiliative (modern leadership type), sustainable, authoritative and transformational (thought leadership type). This supports the notion of Luna & Jolly (2008) that effective leaders may adopt any of these styles depending on the situation and the individuals involved in decision making.

Primitive leadership type with autocratic and bureaucratic styles is implemented when head nurses assign the roles and tasks of nurses and supervise them closely, also when decisions are made by the leader and duly communicated, so that communication is largely one way (Luna & Jolly 2008). This aspect is articulated in our findings regarding head nurses' decision making in ethical dilemmas: a high incidence of ethical dilemmas compels head nurses to be autocratic and bureaucratic.

The results suggest that head nurses on wards are more likely to be involved in resolving dilemmas when they perceive they can exert influence in their working environments and experience higher levels of concern about ethical implications. The findings may help hospitals to train head nurses in decision making in ethical dilemmas. Providing education for head nurses on ways to enhance and facilitate support for those encountering ethical dilemmas and decision making would promote skills and assist in developing an ethical atmosphere.

Study limitations

This study has a number of limitations that may affect the interpretation of the results. Because of the limited number of hospitals and convenience sample of head nurses, the generalizability of the findings may be limited to settings similar to those used in our study (Parahoo 2006).

The research was limited to one country, first-line managers (head nurses on hospital wards). In order to assess the generalizability of the findings, the research should be repeated with head nurses from primary healthcare institutions and also conducted in other countries. Furthermore, it would be valuable to interview head nurses on the basis of the statistical results and to ascertain their attitudes and experiences regarding chosen leadership styles in ethical dilemmas, and also on the impact of such choices on the satisfaction of nurses', patients' and healthcare organizations. Such qualitative research could provide additional insights for research in general.

Conclusions

The application of leadership style in ethical dilemmas is associated not only with the specific situations, but also with certain background factors, such as years of experience in a head nurse's position on a ward, ward specialization and also the incidence of ethical dilemmas. In future research, it would be important to focus on studying the reasons for and consequences of the different leadership styles applied. It is moreover apparent in the findings that head nurses having worked in their positions for more than 10 years more often used primitive leadership with bureaucratic style than did head nurses

with only a few years in their positions. These results highlight the need for nurses who have been working for a long time in their positions to reflect on their practices and to find new ways of learning from practice, colleagues, patients and their relatives.

The study adds to the understanding of the application of leadership styles when head nurses make decisions in ethical dilemmas. However, the implications for nursing policy and practice are limited. The local tradition of the healthcare system in Lithuania is characterized by hierarchical patterns. Only the biomedical approach and physician's profession wield power. Head nurses are educated, competent and even over-qualified for their positions. However, the local hierarchical healthcare system limits head nurses' opportunities to make decisions regarding nursing policy or practice. Head nurses have no influence over their working environment. Thus, only their managerial decisions due to their 'executive power' can turn into a new state-of-the-art leadership in nursing management and practice.

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Conflict of interest

None of the authors of the manuscript has declared any conflict of interest that may arise from being named as an author of the manuscript. There is no conflict of interest with any financial or other type of organization regarding the material discussed in the manuscript.

Author contributions

VZ and TS designed the study. VZ collected and analysed the data. The manuscript was drafted by VZ and critically revised by TS and DL. All authors read and approved the final manuscript.

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Supporting information

Additional Supporting Information may be found in the online version of this article at the publisher's web-site

Table S1 Demographics of the sample ($n = 278$)

Table S2 Statistical characteristics of questionnaire

Table S3 Descriptive statistics: application of leadership styles when head nurses make decisions in ethical dilemmas ($n = 278$)

Table S4 Associations between background factors of head nurses and the leadership styles applied in ethical dilemmas

Table 1 Demographics of the sample (N = 278)

Variables	*Frequency (n)*	*Percent (%)*	*Mean ± SD**
Age			
20-30 years old	2	0.72	31 ± 8.9
31-40 years old	79	28.42	
41-50 years old	109	39.21	
51-60 years old	72	25.89	
Over 60 years old	16	5.76	
Education			
High medical school, Diploma	107	38.51	4.18 ± 3.76
University, Bachelor's degree**	80	28.78	
College, Diploma	64	23.0	
University, Master's degree***	27	9.71	
Years of experience in administrative position			
Up to 1 year	10	3.6	4.46 ± 1.94
1-2 years	44	15.83	
3-5 years	47	16.91	
6-10 years	41	14.75	
11-15 years	49	17.63	
16-20 years	40	14.39	
21-25 years	25	8.99	
26-30 years	22	7.90	
Specialization of the ward			
General medicine (therapy)	72	25.9	5.17 ± 5.18
Surgery	57	20.49	
Psychiatry	34	12.22	
Paediatrics	20	7.19	
Intensive medicine and care	17	6.12	
Community (family) health	10	3.60	
Midwifery	10	3.60	
Gynaecology	8	2.88	
Physical medicine and rehabilitation	8	2.88	
Oncology	6	2.16	
Palliative medicine and care	6	2.16	
Radiology	6	2.16	
Other**** (e.g. diagnostics, dermatology, anaesthesiology, haemodialysis, odontology etc.)	24	8.64	

* $P \leq 0.000$

**Completed one bachelor's degree programme such as nursing, midwifery, social work, education, epidemiology, public health

*** Completed one master's degree programme such as nursing, public health, social work, midwifery

****Wards represented by fewer than 6 research participants - head nurses from different hospitals

Table 2 Statistical characteristics of questionnaire

Variables	*No. of items*	*Resp-onse options*	*Reliability statistics*		*Scale statistics*
			Cronbach's α	*Cronbach's α*[1]	*Mean ± SD*[2]
BACKGROUND					
Age	5	1	-	-	-
Gender	2	1	-	-	-
Educational level and qualification taken	13	1	-	-	-
Years of experience in administrative position	8	1	-	-	-
Level of health care organization	3	1	-	-	-
Status of health care organization	2	1	-	-	-
Specialization of the ward	21	1	-	-	-
Nurse-related factors which influence ethical dilemmas on ward	13	1-5	0.890	0.893	49.94 ± 8.52
Organization-related factors which influence ethical dilemmas on ward	8	1-5	0.889	0.892	30.09 ± 6.07
Head nurse-related factors which influence ethical dilemmas on ward	13	1-5	0.897	0.928	46.37 ± 11.42
Incidence of ethical dilemma situations on ward	7	1	-	-	-
Challenges in dilemma situations	12	1-5	0.905	0.905	44.54 ± 8.51
Experience of impact from groups concerning decision-making in ethical dilemma situations	24	1-6	0.695	0.702	4.10 ± 3.71
Impact of experienced decision-making in ethical dilemma situations	7	1-5	0.846	0.850	27.98 ± 4.61
ACTIONS					
Primitive leadership type	**12**	**1-5**	**0.755**	**0.755**	**3.35 ± 0.56**
• Autocratic leadership style	4	1-5	0.628	0.633	3.08 ± 0.77
• Laissez-faire leadership style	4	1-5	0.620	0.644	3.81 ± 0.62
• Bureaucratic leadership style	4	1-5	0.603	0.604	3.15 ± 0.78
Paternalistic leadership type	**8**	**1-5**	**0.833**	**0.742**	**3.75 ± 0.62**
• Coaching (supervisory) leadership style	4	1-5	0.765	0.779	3.89 ± 0.66
• Charismatic leadership style	4	1-5	0.715	0.725	3.62 ± 0.71

[1] Based on standardized items

[2] $P \leq 0.000$

Modern leadership type	**8**	**1-5**	**0.925**	**0.925**	**4.04 ± 0.68**
• Democratic (participative) leadership style	4	1-5	0.888	0.889	4.07 ± 1.96
• Affiliative (particular) leadership style	4	1-5	0.890	0.890	4.03 ± 0.75
Thought leadership type	**12**	**1-5**	**0.936**	**0.936**	**3.93 ± 0.71**
• Sustainable leadership style	4	1-5	0.855	0.856	3.97 ± 0.71
• Authoritative (expert) leadership style	4	1-5	0.857	0.857	3.82 ± 0.74
• Transformational leadership style	4	1-5	0.845	0.847	3.99 ± 0.69

Table 3 Descriptive statistics: application of leadership styles when head nurses make decisions in ethical dilemmas (N = 278)

General linear model		
Styles	*Mean*	*Std. Deviation*
Democratic (modern leadership type)	4.07	2.8
Affiliative (modern leadership type)	4.03	3.01
Transformational (thought leadership type)	3.99	2.75
Sustainable (thought leadership type)	3.97	2.82
Coaching (paternalistic leadership type)	3.89	2.63
Authoritative (thought leadership type)	3.82	2.94
Laissez – faire (primitive leadership type)	3.81	2.46
Charismatic (paternalistic leadership type)	3.62	2.82
Bureaucratic (primitive leadership type)	3.15	3.13
Autocratic (primitive leadership type)	3.08	3.09

Tests of Within-Subjects Effects					
	Type III Sum of Squares	*df*	*Mean Square*	*F*	*Sig.(p)*
Sphericity Assumed	5069,138	9	563.238	149.469	.000
Greenhouse-Geisser	5069,138	5.009	1011.930	149.469	.000
Huynh-Feldt	5069,138	5.113	991.480	149.469	.000
Lower-bound	5069,138	1.000	5069.138	149.469	.000

Table 4 Associations between background factors of head nurses and the leadership styles applied in ethical dilemma situations

Age and leadership style

	20-30 years old			*31-40 years old*			*41-50 years old*			*51-60 years old*			*Over 60 years old*			*ANOVA*
	n	***Mean***	***SD***	***n***	***Mean***	***SD***	***n***	***Mean***	***SD***	***n***	***Mean***	***SD***	***n***	***Mean***	***SD***	***Sig. (p)***
Autocratic	2	3.63	3.54	79	3.03	3.31	109	3.15	2.85	72	3.05	3.33	16	2.97	2.45	0.626
Laissez – faire	2	4.13	0.71	79	3.81	2.35	109	3.85	2.71	72	3.77	2.39	16	3.66	1.54	0.675
Bureaucratic	2	3.88	2.12	79	2.96	3.48	109	3.20	2.84	72	3.21	3.23	16	3.33	2.24	0.083
Coaching	2	4.0	1.41	79	3.99	2.18	109	3.94	2.35	72	*3.74*	3.31	16	*3.61*	2.66	*0.056*
Charismatic	2	3.75	1.41	79	3.69	2.33	109	3.64	2.87	72	3.59	3.16	16	3.27	3.09	0.273
Democratic	2	4.13	0.71	79	4.24	2.01	109	4.06	3.06	72	*3.92*	3.1	16	*3.92*	2.39	*0.058*
Affiliate	2	4.13	0.71	79	4.15	2.74	109	4.03	2.9	72	3.92	3.39	16	3.83	3.18	0.310
Sustainable	2	4.13	0.71	79	4.06	2.59	109	3.96	2.79	72	3.93	3.0	16	3.75	3.46	0.557
Authoritative	2	3.88	2.12	79	3.83	2.65	109	3.85	2.87	72	3.81	3.3	16	3.60	3.32	0.785
Transformational	2	4.0	2.41	79	4.01	2.29	109	4.03	2.87	72	3.94	3.16	16	3.91	2.31	0.905

Educational level and leadership style

	Bachelor			*Master*			*College*			*Medical school*			*Sig. (p)*
	n	***Mean***	***SD***	***n***	***Mean***	***SD***	***n***	***Mean***	***SD***	***n***	***Mean***	***SD***	
Autocratic	77	3.13	2.86	28	2.89	2.94	62	3.05	3.3	108	3.13	3.2	0.503
Laissez – faire	77	3.9	2.46	28	3.77	2.96	62	3.83	2.14	108	3.74	2.53	0.370
Bureaucratic	77	3.25	3.0	28	2.95	3.18	62	3.0	3.41	108	3.21	3.04	0.116
Coaching	77	4.0	2.28	28	3.92	2.86	62	3.95	2.58	108	*3.75*	2.81	*0.062*
Charismatic	77	3.68	2.79	28	3.47	3.51	62	3.63	2.53	108	3.6	2.86	0.620
Democratic	77	4.1	2.92	28	3.96	3.31	62	4.19	2.39	108	4.01	2.82	0.340
Affiliate	77	4.11	2.75	28	4.05	3.29	62	4.1	2.97	108	3.92	3.15	0.305
Sustainable	77	3.99	2.79	28	3.97	2.82	62	4.07	2.77	108	3.89	2.92	0.402
Authoritative	77	3.90	2.96	28	3.69	3.69	62	3.8	3.16	108	3.81	2.62	0.591
Transformational	77	4.0	2.66	28	3.99	3.02	62	4.15	2.51	108	3.91	2.88	0.166

Years of experience in administrational position and leadership style

	n	***Mean***	***SD***	***n***	***Mean***	***SD***	***n***	***Mean***	***SD***	***n***	***Mean***	***SD***	***n***	***Mean***	***SD***	***Sig. (p)***
Autocratic	***Up to 1 year***			***1-3 years***			***3-5 years***			***6-10 years***			***11-15 years***			
	10	2.25	4.0	44	2.98	3.73	47	3.04	2.96	41	3.13	2.96	49	3.02	3.01	0.004
	16-20 years			***21-25 years***			***26-30 years***									
	40	3.41	2.17	25	3.16	2.46	22	3.14	3.04							
Laissez – faire	***Up to 1 year***			***1-3 years***			***3-5 years***			***6-10 years***			***11-15 years***			
	0	3.85	2.55	44	3.64	2.75	47	3.95	2.23	41	3.87	2.31	49	3.62	2.81	0.017
	16-20 years			***21-25 years***			***26-30 years***									
	40	3.91	2.27	25	4.05	1.78	22	3.68	2.14							
Bureaucratic	***Up to 1 year***			***1-3 years***			***3-5 years***			***6-10 years***			***11-15 years***			
	10	2.25	4.03	44	3.96	3.51	47	3.06	2.87	41	3.29	2.82	49	2.89	3.27	*< 0.001*
	16-20 years			***21-25 years***			***26-30 years***									
	40	3.38	2,1	25	*3.58*	2.76	22	*3.48*	2.2							
Coaching	***Up to 1 year***			***1-3 years***			***3-5 years***			***6-10 years***			***11-15 years***			
	10	3.95	2.35	44	3.82	2.64	47	3.88	2.59	41	3.98	2.39	49	3.62	3.22	0.010
	16-20 years			***21-25 years***			***26-30 years***									
	40	4.14	i.77	25	4.07	2.23	22	3.75	2.81							

	Up to 1 year			***1-3 years***			***3-5 years***			***6-10 years***			***11-15 years***			
Charismatic	10	3.13	2.22	44	3.52	2.22	47	3.76	2.41	41	3.72	2.95	49	3.18	3.08	*< 0.001*
	16-20 years			***21-25 years***			***26-30 years***									
	40	*3.91*	1.96	25	*3.89*	3.1	22	3.71	3.08							
	Up to 1 year			***1-3 years***			***3-5 years***			***6-10 years***			***11-15 years***			
Democratic	10	4.05	3.01	44	4.19	2.21	47	4.17	2.29	41	4.03	2.65	49	3.7	3.97	0.002
	16-20 years			***21-25 years***			***26-30 years***									
	40	4.33	1.67	25	4.15	2.42	22	3.99	2.9							
	Up to 1 year			***1-3 years***			***3-5 years***			***6-10 years***			***11-15 years***			
Affiliate	10	4.13	3.44	44	3.99	3.15	47	4.19	2.16	41	4.06	2.5	49	3.7	3.75	0.006
	16-20 years			***21-25 years***			***26-30 years***									
	40	4.28	2.01	25	4.14	2.74	22	3.79	3.88							
	Up to 1 year			***1-3 years***			***3-5 years***			***6-10 years***			***11-15 years***			
Sustainable	10	4.05	3.26	44	4.08	2.24	47	4.12	2.71	41	3.92	2.49	49	3.44	3.51	*< 0.001*
	16-20 years			***21-25 years***			***26-30 years***									
	40	*4.22*	2.14	25	*4.17*	2.15	22	3.98	2.43							
	Up to 1 year			***1-3 years***			***3-5 years***			***6-10 years***			***11-15 years***			
Authoritative	10	3.73	4.98	44	3.75	2.56	47	3.88	2.49	41	3.82	2.66	49	3.42	3.51	*< 0.001*
	16-20 years			***21-25 years***			***26-30 years***									
	40	*4.14*	2.12	25	*4.16*	2.66	22	3.82	2.6							
	Up to 1 year			***1-3 years***			***3-5 years***			***6-10 years***			***11-15 years***			
Transforma-	10	4.28	1.91	44	3.96	2.40	47	4.01	2.73	41	3.92	2.11	49	3.68	3.58	0.001
tional	***16-20 years***			***21-25 years***			***26-30 years***									
	40	4.3	1.82	25	4.26	2.24	22	3.91	3.43							

Ward specialization and leadership style

	General medical practice (therapy)			***Surgery***			***Paediatrics***			***Psychiatry***			***Intensive medicine and care***			***Other***		***Sig. (p)***
	n	***Mean***	***SD***	***n***	***Mean***	***SD***	***n***	***Mean***	***SD***	***n***	***Mean***	***SD***	***n***	***Mean***	***SD***	***n***	***Mean***	***SD***	
Autocratic	69	3.23	2.79	57	3.1	3.39	20	2.86	3.03	34	2.98	2.75	17	2.96	2.83	81	3.07	3.31	0.397
Laissez-faire	69	3.86	2.49	57	3.86	2.79	20	3.78	3.4	34	3.67	2.18	17	3.88	1.66	81	3.79	2.19	0.718
Bureaucratic	69	3.33	2.99	57	3.05	3.45	20	2.96	3.67	34	2.99	2.74	17	3.27	2.7	81	3.14	3.05	0.168
Coaching	69	3.99	2.72	57	3.93	2.85	20	3.9	3.08	34	3.69	2.31	17	3.99	2.14	81	3.82	2.46	0.274
Charismatic	69	3.84	2.85	57	3.69	2.68	20	3.5	3.03	34	3.36	3.4	17	3.56	2.14	81	3.53	2.54	*0.014*
Democratic	69	4.18	2.45	57	4.02	3.23	20	4.14	3.36	34	3.7	3.0	17	4.34	1.62	81	4.09	2.52	*0.012*
Affiliate	69	4.11	3.09	57	4.01	3.23	20	3.79	3.76	34	3.71	3.09	17	4.28	2.29	81	4.10	2.49	*0.035*
Sustainable	69	4.11	2.48	57	3.97	3.03	20	3.71	3.92	34	3.68	3.19	17	4.13	2.53	81	4.0	2.38	*0.029*
Authoritative	69	3.9	2.45	57	3.85	3.33	20	3.69	3.7	34	3.45	3.29	17	3.94	3.35	81	3.9	2.43	*0.039*
Transformational	69	4.06	3.17	57	4.01	2.57	20	3.83	2.99	34	3.59	2.84	17	4.31	1.99	81	4.08	2.26	*0.002*

Incidence of ethical dilemmas and leadership style

	n	***Mean***	***SD***	***n***	***Mean***	***SD***	***n***	***Mean***	***SD***	***n***	***Mean***	***SD***	***Sig. (p)***
	Several times in a day			***One time in a day***			***Several times in a week***			***One time in a week***			
Autocratic	72	3.36	2.59	24	3.27	1.69	71	3.15	2.85	30	2.93	3.03	
	Several times in one month			***One time in one month***			***Rare***						*< 0.001*
	22	2.68	3.67	19	3.16	3.0	40	2.66	3.72				
	Several times in a day			***One time in a day***			***Several times in a week***			***One time in a week***			
Laissez-faire	72	3.92	2.06	24	3.74	2.78	71	3.75	2.21	30	3.69	2.88	0.289
	Several times in one month			***One time in one month***			***Rare***						
	22	3.88	3.54	19	4.01	2.01	40	3.72	2.47				
	Several times in a day			***One time in a day***			***Several times in a week***			***One time in a week***			
Bureaucratic	72	3.3	3.17	24	3.30	2.04	71	3.3	3.08	30	2.78	1.99	*0.001*
	Several times in one month			***One time in one month***			**Rare**						
	22	2.67	3.52	19	3.2	2.7	40	3.01	3.64				
	Several times in a day			***One time in a day***			***Several times in a week***			***One time in a week***			
Coaching	72	3.98	2.47	24	3.86	1.64	71	3.89	2.69	30	3.71	2.25	0.155
	Several times in one month			***One time in one month***			***Rare***						
	22	3.94	3.37	19	4.12	2.82	40	3.71	2.87				
	Several times in a day			***One time in a day***			***Several times in a week***			***One time in a week***			
Charismatic	72	3.76	2.83	24	3.71	1.95	71	3.63	3.08	30	3.37	2.47	*0.009*
	Several times in one month			***One time in one month***			***Rare***						
	22	3.43	3.21	19	3.97	2.23	40	3.41	2.63				
	Several times in a day			***One time in a day***			***Several times in a week***			***One time in a week***			
Democratic	72	4.17	2.89	24	4.06	1.78	71	4.02	3.05	30	4.0	3.02	0.341
	Several times in one month			***One time in one month***			***Rare***						
	22	4.14	3.6	19	4.29	1.86	40	3.89	2.29				
	Several times in a day			***One time in a day***			***Several times in a week***			***One time in a week***			
Affiliate	72	4.17	2.7	24	3.86	2.9	71	3.98	3.06	30	3.95	3.38	0.165
	Several times in one month			***One time in one month***			***Rare***						
	22	4.16	3.06	19	4.22	2.42	40	3.83	3.28				
	Several times in a day			***One time in a day***			***Several times in a week***			***One time in a week***			
Sustainable	72	4.05	2.79	24	3.87	2.11	71	3.92	3.0	30	3.82	2.98	0.585
	Several times in one month			***One time in one month***			***Rare***						
	22	4.1	3.45	19	4.09	3.25	40	3.94	2.19				
	Several times in a day			***One time in a day***			***Several times in a week***			***One time in a week***			
Authoritative	72	4.0	2.89	24	3.74	1.83	71	3.77	3.2	30	3.6	3.21	*0.075*
	Several times in one month			***One time in one month***			***Rare***						
	22	3.9	3.57	19	4.03	2.66	40	3.66	2.33				
	Several times in a day			***One time in a day***			***Several times in a week***			***One time in a week***			
Transformational	72	4.08	2.72	24	3.9	2.21	71	3.99	2.8	30	3.83	2.58	0.103
	Several times in one month			***One time in one month***			***Rare***						
	22	4.09	2.85	19	4.33	1.97	40	3.83	3.2				

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Leadership styles of nurse managers in ethical dilemmas: Reasons and consequences

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Abstract: ***Background:*** *Understanding the reasons and consequences of leadership styles in ethical dilemmas is fundamental to exploring nurse managers' abilities to influence outcomes for patients and nursing personnel.* ***Purpose:*** *To explain the associations between different leadership styles, reasons for their application and its consequences when nurse managers make decisions in ethical dilemmas.* ***Methods:*** *The data were collected between 15 October 2011 and 30 April 2012 by statistically validated questionnaire. The respondents (N = 278) were nurse managers. The data were analysed using SPSS 20.0, calculating Spearman's correlations, the Stepwise Regression and ANOVA.* ***Results:*** *The reasons for applying different leadership styles in ethical dilemmas include personal characteristics, years in work position, institutional factors, and the professional authority of nurse managers. The applied leadership styles in ethical dilemmas are associated with the consequences regarding the satisfaction of patients,' relatives' and nurse managers' needs.* ***Conclusions:*** *Nurse managers exhibited leadership styles oriented to maintenance, focussing more on the 'doing the job' than on managing the decision-making in ethical dilemmas.*

Keywords: ethical dilemma, nurse manager, leadership

Nursing leadership at all levels is a major issue (Sandstrom, Borglin, Nilsson, & Willman, 2011). Leaders, and the way leadership is performed, have an important role in nursing management. Nurse managers find themselves at a crossroads in the challenging healthcare ethical environment (Cooper, Frank, Gouty, & Hansen, 2002; Drach-Zahavy & Dagan, 2002) because they make decisions that are related to nursing quality, patient satisfaction, finance allocation, ethical climate, professional dignity and so forth.

Nurse managers work in a health care context of high pressure, uncertainty and rapid change. They face unprecedented challenges on a daily basis (Dignam et al., 2012), and are being challenged by many demands and issues (Anthony et al., 2005). To confront these demands and challenges, they must have the ability to make decisions based on ethics (Raines, 2000). Moreover, there is a need to recognise the complex interconnectivity between decision-making, leadership, and ethical dilemmas in the nursing management context. For nurse managers, coping with leadership in a context of ethical dilemmas is difficult. Often, nurse managers cannot act according to their own personal values and norms. This generates tensions between the nurse manager's personality, organisation, patients and other actors in the real world of healthcare management (Goethals, Gastmans, & de Casterlé, 2010).

The literature on nursing management and leadership is growing rapidly and presents leadership as a management role (Anthony et al., 2005; Levey, Hill, & Greene, 2002), nonformal activity (Davidson, Elliott, & Daly, 2006), and there is an emphasis on ethical codes (Aitamaa, Leino-Kilpi, Puukka, & Suhonen, 2010), ethical principles (Førde & Vandvik, 2005), ethical reasoning (Loviscky, Treviño, & Jacobs, 2007), ethical decision-making (Raines, 2000), ethical decisions (Varcoe et al., 2004), mentoring (Bally, 2007), coaching (Baxter, 2013), tutoring (Stewart, Usher, Nadakuitavuki, & Tollefson, 2006), education (Calpin-Davies, 2003), etc.

While it can be argued that there are many challenges confronting nurse managers as leaders at the present time (new roles, new technology, financial constraints, greater emphasis on participation, cultural diversity and education), it must be emphasised that leadership should not be viewed as an optional role or function for nurse managers (Curtis, de Vries, & Sheerin,

2011). The leader must be knowledgeable about leadership and be able to apply leadership skills in all aspects of work (Davidson, Elliott, & Daffurn, 2003). There is the need for nurse managers as for decision-makers to be conscious in the application of leadership styles, which influence decision-making in ethical dilemmas (Winston, 2005).

What this body of work reveals is, there is a lack of studies about the ethical dilemmas encountered by nurse managers in clinical settings, and the relationships between different leadership styles and decision-making. Since most research focuses on contextual barriers to nurse managers' practice, little is known about why certain leadership styles are applied (*reasons*), and the *consequences* of this application (e.g., Cummings et al., 2010; Fraser & Strang, 2004).

Evident here is the complex research object, which integrates leadership styles, decision-making of the nurse manager and ethical dilemmas. Ethical dilemma is the context for decision-making, and leadership styles are instruments that are applied by nurse managers. This research emphasises the nurse manager's acting (decision-making) through leadership styles.

The purpose of the research is to explain the associations between different leadership styles, reasons for their application and its consequences when nurse managers make decisions in ethical dilemmas.

The research questions are:

1. How are different reasons associated with leadership styles when nurse managers make decisions in ethical dilemmas?
2. How are different leadership styles associated with the consequences when nurse managers make decisions in ethical dilemmas?

Literature review

Leadership for nurse managers

Leadership is the sum of personal characteristics and formal education, as well as the context and organisation in which the leadership is practised (Sandstrom et al., 2011). Leadership cannot be studied in isolation from the work environment because of the intricate interplay between factors such as organisational culture, interprofessional power relations, job satisfaction, quality of care, etc. (Rosengren, Athlin, & Segesten, 2007; Sandstrom et al., 2011; Vesterinen, Suhonen, Isola, Paasivaara, & Laukkala, 2013). Leaders are also influenced by the organisational culture, which has an impact on a nurse manager's leadership style. It is the manager's style that influences motivation, morale, satisfaction and retention of nursing personnel (Shearer, 2012). Nurse managers must clarify values, promote personal harmony, enhance understanding among nurses, patients and other personnel, and confront groups subverting values (Prilleltensky, 2000; Silén, Tang, Wadensten, & Ahlström, 2008). Feelings of powerlessness affect nurse managers' autonomous practices in ethical dilemmas (Winland-Brown & Dobrin, 2009). Leadership for nurse managers should pervade nursing practice and management where nurse managers apply different leadership styles when they make decisions (Clegg, 2000).

Leadership has been studied in a variety of disciplinary fields. The most common conceptualisations of leadership include four elements: (a) leadership is a process, (b) leadership entails influence, (c) leadership occurs within a group setting or context, and (d) leadership involves achieving goals that reflect a common vision (Cummings et al., 2010).

In this article we use the concepts of leadership styles of Woods (2010) and Kelly (2010). These are: (i) primitive leadership characterised by an autocratic, laissez-faire, bureaucratic style; (ii) paternalistic leadership characterised by coaching (supervisory) and charismatic styles; (iii) modern leadership characterised by a democratic (participatory) and affiliative (particular) style; (iv) thought leadership characterised by a sustainable, authoritative (expert) and transformational style.

Ethical dilemma in nursing management

The important issue for nurse managers is to do what is right and to do good things in their work. However the conducted research studies show that nurse managers often feel uncertain about how to lead in ethical dilemmas (Bowman, 2010). Then nurse managers' skills and knowledge in the application of variety of leadership styles in ethical dilemmas is one of the crucial things (Bondas, 2006).

Ethical dilemma in nursing management involves a close-run race between one idea of what is right and fitting, and another – between the values, beliefs and attitudes, which underpin such definitions (Silén et al., 2008). An ethical dilemma is a situation that will often involve an apparent conflict between moral imperatives, in which to obey one would result in transgressing another (Lee, Swisher, & Arslanian, 2005). However, human beings have complex social relationships that cannot be ignored (Gilliland, 2010).

Deciding what nurse managers should do involves teasing out and weighing up the values upon which such decisions are based (Silén et al., 2008). In ethical dilemmas nurse managers balance loyalty to the job with their own conviction that they are fulfilling their mission concerning the provision of good care (Mamhidir, Kihlgren, & Sørlie, 2007).

Leadership and decision-making in ethical dilemmas

Ethical dilemmas are troublesome situations likely to result in conflict (Bell & Breslin, 2008). A variety of reasons influence decision-making regarding the same ethical dilemma (Winland-Brown & Dobrin, 2009). Personal characteristics, experience, authority, needs and competence are all good *reasons* for nurse managers to apply different leadership styles in ethical dilemma resolutions (Bell & Breslin, 2008).

The consequences of the leadership styles applied in ethical dilemmas have rarely been studied. Some studies show that the application of transformational leadership when nurse managers confront ethical dilemmas affects the implementation of an open discussion culture among nurses on the ward (Gifford, Davies, Edwards, & Graham, 2006) and reduces distress among nurses (Sandstrom et al., 2011), furthermore improving patient outcomes (Wong & Cummings, 2007). Researchers have studied the *consequences* of leadership in the following aspects: Patient care and handling of work in relation to patients' autonomy, approaching the patient, and ethically correct actions for each individual patient (Skogstad, Einarsen, Torsheim, Aasland, & Hetland, 2007; Sandstrom et al., 2011); adherence to both client and system-centred decisions concerning the equal and fair distribution of resources related to the provision of nursing service (Fraser & Strang, 2004); enabling staff to apply guidelines, creating a positive milieu of best practice (Gifford et al., 2006); relevance and fit with organisational and practice issues, multiprofessional relationships and collaboration (Rycroft-Malone, 2008).

Decision-making in ethical dilemmas is based upon recognition of the values that underlie the beliefs and attitudes, and determine the moral behaviour (Lindy & Schaefer, 2010) of nurse managers. Moral rules are intended to apply universally, to human life in general and to all people, but decisions can only be responsible if they are a response to the specific needs and demands of a specific situation. Leadership style is only one variable among many that determine the leader's behaviour and attitudes. Labels of leadership styles contain value connotations that have made it difficult to investigate this issue objectively, especially in respect of decision-making in ethical dilemmas (Cummings et al., 2010).

Methods

Sample and settings

The total sample consisted of 278 nurse managers working in five major state-funded clinical hospitals in each of the five regions of the country (Lithuania) surveyed.

The selection criteria for hospitals were the following: Hospitals are not specialised (such as in infectious diseases, nursing care, children, oncological, primary health care centre); have the status of clinical University level hospital with integrated services from primary, secondary, tertiary and quaternary health care levels (Torrey, 2014) as well as practice and research; the hospital publicly acknowledges support for nurses' autonomy in their daily practice, their opportunities to develop a professional and managerial career according to their educational level, and the implementation of advanced nursing strategy.

Characteristics of hospitals where research participants work include: Number of beds ranging

from 874 to 1,033; number of patients receiving services in medical treatment and nursing care at least 47,000 per year; number of wards in each hospital at least 40; and the mean of the total nurse population in every hospital is 913.8 ($P < 0.000$).

Statistically, the sample size was representative of the population with 5% standard error and 95% confidence level. Most of the nurse managers were working in general medicine (34.54%) and surgery (20.49%). Research participants represented 21 ward specialisations, such as palliative medicine and care, gynaecology, radiology, operating room, neurology, etc. Their mean age is about 31 years and experience in administrative position is about 4.46 years. All the research participants were women (see Table 1).

Nurse managers acquired nursing qualifications at medical schools (38.5%) and at colleges (22.3%). At universities, 28.8% of nurse managers acquired Bachelor degrees (BA) in nursing, social work, public health, epidemiology, midwifery or education and 9.7% had completed MA studies in nursing, public health, education or midwifery.

Table 1: Demographics of the sample ($N = 278$)

Variables	Frequency (*N*)	Percent (%)	Mean ± SD*
Age			
20–30 years old	2	0.72	
31–40 years old	79	28.42	
41–50 years old	109	39.21	31 ± 8.9
51–60 years old	72	25.89	
Over 60 years old	16	5.76	
Education			
College	171	61.51	4.18 ± 3.76
University	107	38.49	
Experience in nurse manager's position			
1–5 years	101	36.34	
6–10 years	41	14.75	
11–15 years	49	17.63	
16–20 years	40	14.39	
21–25 years	25	8.99	
26–30 years	22	7.90	
Specialisation of the ward			
General medicine (e.g., diagnostics, dermatology, anaesthesiology, haemodialysis, odontology, therapy)	96	34.54	
Surgery	57	20.49	
Psychiatry	34	12.22	
Paediatrics	20	7.19	5.17 ± 5.18
Intensive medicine and care	17	6.12	
Community (family) health	10	3.60	
Midwifery & gynaecology	18	6.48	
Physical medicine and rehabilitation	8	6.48	
Palliative medicine & oncology	18	4.32	

*$P < 0.000$.

Medical school is identical to a vocational high school with the special focus on professional skills, and this education was valid until 2001. In that year, the Law of Nursing and Midwifery Practice (2001) announced that every nurse (no matter the formal status such as practitioner or manager) must be qualified with a BA level in nursing. College and university higher education for nurses in the country surveyed differ in the following ways:

- *Length of studies* – 3 years at college and 4 years at university;
- *Qualification* – college students graduate with a professional BA, which represents a non-university professional level of higher education, while university students graduate with a BA, which represents an academic level of higher education;
- *Continuing formal education* – after college graduation nurses may continue their learning at university for 1 year of extra compulsory studies in order to receive the university level BA. This qualification opens up opportunities to nurses to progress to study at MA and PhD level at university;
- *Professional (nursing) career* – graduation with a college or university level BA degree has the same influence on nurses' professional and managerial career opportunities in health care institutions;

- *Managerial (administration) career* – only nurses with an MA degree in nursing and/or public health may apply for managerial positions such as nurse manager, or vice-director for nursing at secondary, tertiary or quaternary health care level (Torrey, 2014) institutions;
- *Academic (teaching) career* – nurses with a professional BA degree may work as mentors for student practice at health care institution and the college. Nurses with a university BA may work as teachers of practice-related study subjects such as 'nursing manipulations and techniques' or can be mentors of nursing practice at college. Nurses only with MA degree level education may start their lecturing career at college level and deliver academic study subjects. Only nurses with PhD level education may work at university level as lecturers/teachers;
- *Research (scientific) career* – only nurses with an MA degree may continue a career in applied research at college, and only nurses with a PhD degree could continue their scientific work at university and at tertiary and quaternary health care level hospitals.

The term such as 'nurse manager' means the formal title of the work position for heads or formal leaders in nursing on hospital wards. In the country (Lithuania) studied, nurse managers on the ward are subordinate to the head physician on the ward as well as to the head nurse of the hospital/vice-director for nursing. The term 'nurse manager' is identical to such terms as 'middle manager' in management or 'head nurse' in nursing management, and means the nurse (formal) leader who is responsible for the supervision and management of the administrative and clinical aspects of nursing on the ward.

Procedure

The survey format was a paper self-completion questionnaire with closed-ended questions and scaled responses, which provided the respondents with a defined set of answers.

Prior to distributing the questionnaire, the pre-testing procedure with seven people (hereinafter *experts*), was conducted. Sporrong, Höglund, and Artnetz (2006), recommends that participants in the in the pre-testing evaluation should comprise at least 7 and not more than 12 experts. Experts were graduate nurse managers, with BA and MA in Nursing, and working in managerial positions for at least 5 years. As a result of this phase one item from the questionnaire part of 'consequences' was eliminated. These experts did not participate as respondents in the further research. Experts evaluated the following aspects related to the content validity assurance (Umbach, 2005): Any terms or words that were unfamiliar; the clarity of the questions; the flow of the questionnaire; and the actual time required to complete the questionnaire. The researcher (VZ) sat with the experts as they completed the pre-test, and personally interviewed each of them after she completed the pre-test. This feedback improved the quality and the content of the questionnaire.

The second phase was telephone and face-to-face communication with the directors of the selected hospitals about the research, survey process and the questionnaire.

After the permissions to perform the survey were given to researchers, the third phase of the survey started taking in account the recommendations of Kelley, Clark, Brown, and Sizia (2003) and Polit and Beck (2004). Head nurses of each hospital were facilitators between the researchers and nurse managers on wards: Before the visits by researchers nurse managers were informed about the research aim and its implication for nursing management, nurse managers' right to participate or not participate in the survey. The facility for nurse managers to come and complete the questionnaire was organised; at the time of the survey, researchers attended each of the five hospitals so as to answer queries raised by respondents regarding the survey and the questionnaire; every respondent was provided with a common reference point in order to increase the likelihood of their understanding questions in a similar manner. On a survey day, every nurse manager in every hospital was free to come to the facility from 10.00 to 14.00 to complete the tool; respondents placed the completed questionnaires in a paper box to ensure anonymity. Respondents were informed about the possible time scale for completing the questionnaire as around 40–60 minutes, and the

actual average time taken for each questionnaire was approximately 47 (±4 SD) minutes. Head nurses of hospitals did not participate in the survey, so that nurse managers would not feel any power-related pressure, and the ethical principles regarding confidentiality and voluntary participation of nurse managers would be assured.

Data collection and analysis

Data were collected between 15 October 2011 and 30 April 2012 by a statistically validated questionnaire distributed to 344 (total population) nurse managers in five major hospitals in Lithuania. The response rate was 83%. SSPSS 20.0 for Windows was used to process the collected data. The internal consistency and reliability of the questionnaire developed and piloted for this study was tested with Cronbach's alpha resulting in a level of statistical significance of $\alpha = 0.05$.

Spearman's correlation as a nonparametric measure was used to reveal the statistical dependence between two variables such as 'reasons' and 'actions' (Parahoo, 2006). Stepwise Regression was used to find the most parsimonious set of predictors (reasons and actions, which mean the applied leadership styles) that are most effective in predicting the dependent variables (consequences) using a norm of not <40 cases for each independent variable. Stepwise Regression was useful in finding relationships that have not been tested before. ANOVA was applied to confirm the differences in the consequence of the leadership styles among nurse managers and the reasons for their application in ethical dilemmas (Parahoo, 2006).

Instrument

The original validated questionnaire (Zydziunaite, Lepaite, & Suominen, 2013) on *nursing leadership when making decisions in ethical dilemmas* was used. The tool consisted of four parts: *Background*, *reasons*, *actions* and *consequences*. The construct of the tool emphasises reasons, actions and consequences of leadership in decision-making within decision-making in ethical dilemmas, and is based on the Model of Ethical Decision-Making by Swisher, Arslanian, and Davis (2005).

To achieve methodological rigour the researchers were careful to construct questions and statements, which reflect the reasons, actions and consequences of nurse managers' decision-making in ethical dilemmas. Researchers using the tool avoided presenting too much detail in every part, in order not to predispose the respondents or represent confounding that can bias research results. The instrument consists of 29 questions and 160 statements in total. Every question in the tool is a matrix-type with the answer above the table and the statements in the matrix. To measure every statement in parts such as reasons, actions and consequences of the questionnaire, respondents were asked to use the Likert-type scale ranging from 1 (totally disagree) to 5 (totally agree).

The Cronbach's values of the tool were 0.755–0.940 (see Table 2).

The four-part tool used for data collection was constructed on the basis of the systematic literature review (Zydziunaite, Suominen, Åstedt-Kurki, & Lepaite, 2010):

- The *Background* is based on the literature (Raines, 2000; Rosengren et al., 2007; Severinsson & Hummelvoll, 2001; Shirey, 2005; Stewart et al., 2006; Varcoe et al., 2004; Winland-Brown & Dobrin, 2009, etc.), which has noted their effects on actions and consequences in ethical dilemmas. This part consists of 7 multiple choice questions with 31 statements in total.
- The *Reasons* part includes 7 matrix-type questions with 59 statements in total. The conceptual framework for this part is created on the basis of the following publications of Drach-Zahavy and Dagan (2002), Fraser and Strang (2004), Johnstone, Da Costa, Turale, and Fanzcmhn (2004), Førde and Vandvik (2005), Dierckx de Casterlé, Izumi, Godfrey, and Denhaerynck (2008), Gilliland (2010), Goethals et al. (2010). Questions cover such components as personal characteristics (13 statements), opportunity to improve competencies (8 statements), professional needs (11 statements), professional satisfaction (7 statements), experience of pressure (4 statements), teamwork (7 statements), reflection after action (4 statements), value of organisational ethics (5 statements).

Table 2: The statistical information about the instrument

		N	Min	Max	Mean	SD	Cronbach's α		
Reasons									
Work related reasons	Nurse related factors	278	1.23	5	3.84	0.66	0.890	0.888	
	Organisation related factors	278	1	5	3.76	0.76	0.889		
	Department related factors	278	1	7.31	3.57	0.88	0.897		
	Challenges	278	1.25	5	3.71	0.71	0.905		
	Experiencing the impact	278	1	2	1.71	0.15	0.695		
	Impact for the nurse manager	278	1.86	5	3.99	0.66	0.847		
Nurse manager related reasons	Recognition	278	1	5	3.71	0.72	0.732	0.912	
	Participation	278	1	6	3.17	0.71	0.747		
	Importance	278	1	5	3.74	0.76	0.740		
	Possibility to develop competence	278	1	5	3.26	0.63	0.706		
	Satisfaction	278	1	5	3.70	0.74	0.850		
	Profession related reasons	278	1	5	3.98	0.74	0.892		
Actions									
Primitive leadership	Autocratic leadership style	278	1	4.5	3.08	3.09	0.628	0.755	0.951
	Laissez-faire leadership style	278	2	5	3.81	2.46	0.620		
	Bureaucratic leadership style	278	1	5	3.14	3.13	0.603		
Paternalistic leadership	Coaching leadership style	278	1.75	5	3.88	2.63	0.765	0.833	
	Charismatic leadership style	278	1.25	5	3.62	2.82	0.715		
Modern leadership	Democratic leadership style	278	1	5	4.07	2.80	0.888	0.925	
	Affiliative leadership style	278	1	5	4.03	3.01	0.890		
	Sustainable leadership style	278	1	5	3.97	2.82	0.855		
Thought leadership	Authoritative leadership style	278	1	5	3.82	2.94	0.857	0.936	
	Transformational leadership style	278	1	5	3.99	2.75	0.745		
Consequences									
Experience		278	1	5	3.83	0.77	0.830	0.940	
Professional satisfaction		278	1	5	3.80	0.56	0.781		
Improvement of decision-making competencies		278	1	5	3.89	0.77	0.945		
Improvement of management competencies		278	1	5	3.25	0.68	0.744		
Personal satisfaction		278	1	5	3.74	0.98	0.907		

Example. *Question*: How do you participate in teamwork with nurses, when you make decisions in ethical dilemmas? *Answers*: The teamwork is initiated by any nurse; in teamwork I am the only leader; in teamwork the leader could be any nurse; the team discussions are initiated by any nurse; in team discussions the leader could be any nurse; the team meetings are initiated by any nurse; I am the only person who initiates team meetings with nurses.

- The *Actions* part consists of 10 questions with 40 statements in total. Every question includes four statements and represents the specific leadership style. These concerned different leadership styles such as autocratic, laissez-faire, bureaucratic, coaching, charismatic, democratic, affiliative, sustainable, authoritative and transformational. The conceptual framework is based on the publications of Clegg (2000), Prilleltensky (2000), Levey et al. (2002), Davidson et al. (2003, 2006), Gifford et al. (2006), Germain and Cummings (2010), Kelly (2010), etc.

  Example. *Question*: "What is you familiarity with the nuances in the matrix, when you make decisions in ethical dilemmas?" *Answers*: I trust nurses when they make decisions; I rely on a discipline to influence nurses in decision-making; I am focused only on decision-making, despite nurses' tension or fear; I ask other departments to help to coordinate the decision-making.

- The *Consequences* part includes 5 questions with 30 statements in total. The conceptual framework of this part is based on publications of Cooper et al. (2002), Calpin-Davies (2003), Anthony et al. (2005), Bondas (2006), Bally (2007), Bell and Breslin (2008), Bowman (2010), Cummings et al. (2010), etc. Questions emphasise satisfied needs (8 statements), improved competencies of nurse managers (13 statements), increase of respect for nurse managers (9 statements).

  Example. *Question*: "What competencies do you improve through decision-making in ethical dilemmas?" *Answers*: I improve teamwork competencies; I improve social competencies; I improve management competencies; I improve administrational competencies; I improve educational competencies; I improve professional competencies; I improve leadership competencies; I improve ethical competencies.

The answers of nurse managers reflect their perceptions.

Ethics

An ethical statement was received from the Board of the Vytautas Magnus University (26-08-2011, Protocol No. 9) that the study is ethically acceptable and could be performed. Written permissions to carry out the investigation were given by the general directors or vice-directors for nursing in all five health care institutions. The questionnaire was voluntarily and anonymously answered with no possibility of tracing the research participants.

The study had the relevant permissions of the five health care institutions involved. Informed consent, right to refuse or withdraw from the study, confidentiality and anonymity of the participating managers were duly ensured during the research process (Moore & McCabe, 2003).

Findings

Associations between the reasons and leadership styles when nurse managers make decisions in ethical dilemmas

The findings showed that the *reasons* for applying different leadership styles in ethical dilemmas included the personal characteristics of nurse managers, years in nurse manager's position, institutional factors, professional authority and professional needs, improvement of competencies and professional satisfaction.

Reasons such as professional satisfaction and opportunity to improve competencies correlated with at least 8 different leadership styles among the 10 studied in this research (see Table 3).

The nurse managers reported that their personal characteristics and years in work position were very weakly associated with autocratic, bureaucratic and laissez-faire leadership. But these factors are strongly associated with the application of *coaching*, *charismatic*, *democratic*, *affiliative*, *sustainable* and *transformational* leadership. The association between personal characteristics and affiliative leadership, and between years in

Table 3: Associations of reasons and leadership styles when nurse managers make decision in ethical dilemmas (N = 278 nurse managers)

	Styles		Auto-cratic	Laissez-faire	Bureau-cratic	Coach-ing	Charis-matic	Demo-cratic	Affiliative	Sustain-able	Authorita-tive	Transfor-mational
Personal features	Correlation coefficient		0.284**	0.370**	0.160**	0.467**	0.463**	0.475**	0.492**	0.394**	0.443**	0.432**
	Sig. (2-tailed)		0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Years in work position	Correlation coefficient		0.208**	0.320**	0.148*	0.451**	0.427**	0.537**	0.548**	0.551**	0.594**	0.553**
	Sig. (2-tailed)		0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Institutional factors	Correlation coefficient		0.278**	0.203**	0.193**	0.300**	0.299**	0.358**	0.355**	0.314**	0.310**	0.370**
	Sig. (2-tailed)		0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Professional authority	Correlation coefficient		0.206**	0.388**	0.159**	0.489**	0.486**	0.590**	0.602**	0.578**	0.602**	0.602**
	Sig. (2-tailed)		0.001	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Professional needs	Correlation coefficient		0.279**	0.313**	0.282**	0.412**	0.458**	0.452**	0.445**	0.485**	0.495**	0.522**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Opportunity to improve multidisciplinary competencies	Correlation coefficient		0.291**	0.448**	0.254**	0.646**	0.584**	0.647**	0.671**	0.662**	0.684**	0.632**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Opportunity to improve managerial competence	Correlation coefficient		0.301**	0.409**	0.235**	0.566**	0.555**	0.504**	0.520**	0.547**	0.547**	0.541**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Professional satisfaction	Correlation coefficient		0.579**	0.345**	0.482**	0.511**	0.560**	0.520**	0.499**	0.519**	0.534**	0.531**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**Spearman's correlation (rho) is significant at the 0.01 level (2-tailed). *Spearman's correlation (rho) is significant at the 0.005 level (2-tailed).

work position and authoritative leadership are strongest in comparing with other leadership styles.

Opportunities to improve multidisciplinary and managerial competencies were associated strongly with a variety of leadership styles such as authoritative, transformational, affiliative, sustainable. It is evident from findings that the weakest associations of competence improvement are with autocratic and bureaucratic leadership when nurse managers make decisions in ethical dilemmas.

Findings show that personal authority is associated more strongly with the application of *affiliative*, *authoritative*, *transformational*, *democratic* and *sustainable* than with coaching and charismatic leadership. The weakest correlation is between personal authority and bureaucratic leadership.

Professional needs of nurse managers are more strongly associated with *transformational*, *authoritative* and *sustainable* than with charismatic, democratic, affiliative and coaching leadership. Correlations with autocratic, bureaucratic leadership styles are quite weak.

The professional satisfaction of nurse managers is more or less strongly associated with the application of all studied leadership styles, but the weakest correlation is evidently with laissez-faire leadership.

Institutional factors were associated with the application of any of the 10 leadership styles studied. The application of *transformational* leadership style did exert a weak influence where nurse managers were role models for nurses to develop their sense of professional identity and their identification with the organisation.

Associations between the different leadership styles and the consequences when nurse managers make decisions in ethical dilemmas

The data show that the application of different leadership styles in ethical dilemmas could determine different consequences. Leadership styles in ethical dilemmas have a role in determining the consequences regarding the satisfaction of patients,' relatives' and nurse managers' professional needs.

The results demonstrate that improving nurse managers' competencies was associated with the application of seven of the 10 leadership styles. For example, improvement of teamwork, managerial, educational, professional, and leadership competencies correlated with the application of seven leadership styles; four leadership styles had an association with the improvement of social competence, and six leadership styles influenced the improvement of administrational and social competencies in ethical dilemmas (see Table 4).

The correlation results showed that the application of an *authoritative* leadership style was associated with the satisfaction of nurses' professional needs; the patients' relatives' needs were satisfied when nurse managers applied *charismatic* and *autocratic* leadership; *charismatic*, *autocratic* or *bureaucratic* leadership styles correlated with the satisfaction of the needs of the unit.

Association of leadership styles with the improvement of nurse manager's competencies differed: (i) improvement of teamwork and social competencies significantly correlate with the application of *sustainable* leadership; (ii) improvement of managerial, professional, leadership and ethical competencies is significantly related to the application of *authoritative* leadership.

Increase of respect for the nurse manager was associated with various leadership styles: The application of *transformational* leadership was associated with respect for nurses on the ward; the application of *authoritative* style was associated with respect for the head physician on the ward and for the hospital administration; nurse manager's self-respect correlated with the application of *authoritative* and *transformational* leadership styles.

The findings of the stepwise regression showed that *transformational* leadership and personal characteristics were associated with the experiences of professional authority, satisfaction of professional needs, and improvement of multidisciplinary competencies. Improvement of managerial competencies was associated with nurse managers' personal characteristics (see Table 5).

Some leadership styles were associated with the following aspects: *transformational* leadership with experiences of professional authority and satisfaction of professional needs of the nurse manager; *authoritative* and *sustainable* leadership with the improvement of nurse managers' multidisciplinary competencies; improvement of nurse managers' managerial competencies with the application of *charismatic* and *sustainable* leadership; satisfaction of patients and their relatives' needs with autocratic and *bureaucratic* leadership.

Discussion

Nurse managers have numerous reasons in electing to apply leadership styles to differing effect in ethical dilemmas. The results imply that nurse managers exhibit a leadership style oriented to maintenance, focussing more on doing the job than on leading the decision-making in ethical dilemmas.

The comparison between the leadership styles actually adopted and those preferred by the nurse managers showed that the leadership style preferred always scored higher than the style adopted (Germain & Cummings, 2010). Our findings show that nurse managers exercised their formal power and/or professional self-confidence through individually made decisions. They would often apply autocratic and bureaucratic leadership when making decisions in ethical dilemmas. This shows that conformist practice (following conventions) constitutes a major barrier for

Table 4: Associations between the application of different leadership styles and its consequences in ethical dilemmas (N = 278 nurse managers)

	Styles	Auto-cratic	Laissez-faire	Bureau-cratic	Coach-ing	Charis-matic	Demo-cratic	Affiliative	Sustain-able	Authori-tative	Transfor-mational
Satisfied needs											
Nurses' personal needs	Correlation coefficient	0.061	0.260**	0.031	0.263**	0.204**	0.276**	0.277**	0.301**	0.353**	0.263**
	Sig. (2-tailed)	0.310	0.000	0.611	0.000	0.001	0.000	0.000	0.000	0.000	0.000
Nurses' professional needs	Correlation coefficient	0.271**	0.325**	0.264**	0.461**	0.479**	0.455**	0.463**	0.499**	0.534**	0.492**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nurse managers' personal needs	Correlation coefficient	−0.068	0.160**	−0.002	0.111	0.082	0.187**	0.183**	0.157**	0.219**	0.181**
	Sig. (2-tailed)	0.258	0.008	0.975	0.065	0.173	0.002	0.002	0.009	0.000	0.002
Nurse managers' professional needs	Correlation coefficient	0.003	0.126**	0.110	0.144*	0.099	0.157**	0.106	0.217**	0.223**	0.181**
	Sig. (2-tailed)	0.957	0.036	0.067	0.016	0.099	0.009	0.079	0.000	0.000	0.002
Patients' needs	Correlation coefficient	−0.035	−0.001	−0.031**	0.126*	0.054	0.080	0.089	0.182**	0.198**	0.253**
	Sig. (2-tailed)	0.556	0.990	0.606	0.036	0.372	0.182	0.139	0.002	0.000	0.000
Patients' relatives' needs	Correlation coefficient	0.408**	0.233**	0.382**	0.327**	0.440**	0.279**	0.291**	0.384**	0.387**	0.334**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Needs of the ward	Correlation coefficient	0.466**	0.235**	0.484**	0.335**	0.493**	0.231**	0.201**	0.327**	0.318**	0.342**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000
Needs of the hospital	Correlation coefficient	0.032	0.070	0.068	0.111	0.168**	0.117	0.052	0.159**	0.196**	0.119*
	Sig. (2-tailed)	0.600	0.242	0.259	0.065	0.005	0.051	0.385	0.008	0.001	0.047
Improved competencies of nurse managers											
Teamwork competence	Correlation coefficient	0.162**	0.356**	0.192**	0.499	0.459	0.489	0.552**	0.589**	0.567**	0.524**
	Sig. (2-tailed)	0.007	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Social competence	Correlation coefficient	0.203**	0.327**	0.166**	0.359**	0.271**	0.397**	0.422**	0.589**	0.567**	0.524**
	Sig. (2-tailed)	0.001	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Managerial competence	Correlation coefficient	0.204**	0.303**	0.287**	0.504**	0.409**	0.458**	0.522**	0.533**	0.579**	0.543**
	Sig. (2-tailed)	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Administrational competence	Correlation coefficient	0.277**	0.330**	0.204**	0.510**	0.393**	0.516**	0.520**	0.498**	0.575**	0.549**
	Sig. (2-tailed)	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Educational competence	Correlation coefficient	0.190**	0.344**	0.178**	0.479**	0.449**	0.482**	0.529**	0.514**	0.588**	0.489**
	Sig. (2-tailed)	0.001	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Professional competence	Correlation coefficient	0.249**	0.359**	0.241**	0.583**	0.460**	0.536**	0.579**	0.579**	0.614**	0.571**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

(Continued)

Table 4: Continued

	Styles	Auto-cratic	Laissez-faire	Bureau-cratic	Coach-ing	Charis-matic	Demo-cratic	Affiliative	Sustain-able	Authori-tative	Transfor-mational
Leadership competence	Correlation coefficient	0.261**	0.362**	0.186**	0.485**	0.440**	0.475**	0.499**	0.503**	0.559**	0.492**
	Sig. (2-tailed)	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ethical competence	Correlation coefficient	0.163**	0.324**	0.113	0.468**	0.358**	0.453**	0.488**	0.488**	0.524**	0.458**
	Sig. (2-tailed)	0.007	0.000	0.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Increase of respect for nurse managers											
More respect for the nurse manager from the nurses	Correlation coefficient	0.173**	0.290**	0.139*	0.429**	0.368**	0.438	0.457**	0.488	0.533**	0.496**
	Sig. (2-tailed)	0.004	0.000	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000
More respect for the nurse manager from the head physician	Correlation coefficient	0.104	0.259**	0.087	0.325**	0.291**	0.427**	0.446**	0.447**	0.472**	0.437**
	Sig. (2-tailed)	0.084	0.000	0.147	0.000	0.000	0.000	0.000	0.000	0.000	0.000
More respect for the nurse manager from the hospital administration	Correlation coefficient	0.186**	0.210**	0.117	0.316**	0.274**	0.385**	0.391**	0.352**	0.418**	0.381**
	Sig. (2-tailed)	0.002	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Increase of self-respect of nurse manager	Correlation coefficient	0.204**	0.281**	0.145*	0.422**	0.418**	0.478**	0.489**	0.502**	0.522**	0.522**
	Sig. (2-tailed)	0.001	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**Spearman's correlation (rho) is significant at the 0.01 level (2-tailed). *Spearman's correlation (rho) is significant at the 0.005 level (2-tailed).

nurse managers. This influences their ability to take the lead and make the appropriate decisions, thus showing leadership in ethical dilemmas (Dierckx de Casterlé et al., 2008).

The results show that nurse managers need to apply their experience, knowledge, expertise, and improve their professional qualifications. Opportunities to improve the multidisciplinary and managerial competencies are the main reasons for nurse managers to apply a variety of leadership styles in ethical dilemmas. This may also indicate that the nurse manager treats ethical dilemmas as learning opportunities (Johnstone et al., 2004).

The main reason for applying an authoritative style in ethical dilemmas was years in the position. The expertise acquired through work experience plays a decisive role. Years of experience affect decision-making: The more experienced a nurse manager is the more critical reasoning is applied (Shirey, 2005).

In ethical dilemmas nurse managers make decisions, which generally satisfy only one party, in most cases the patient (Cooper et al., 2002). This application also satisfies the professional needs of a nurse manager. This satisfaction is related to the application of authoritative leadership. This may mean that the nurse manager is able to demonstrate command and authority over the nurses while getting the job done. The findings of our research show that personal authority and satisfaction of professional needs are the reasons for applying affiliative, authoritative and transformational leadership. These styles involve actual professional competence and expertise. Here formal power does not play the key role. In laissez-faire leadership, professional satisfaction is a doubtful reason: In this case the nurse manager leaves the ethical dilemmas to self-direction and transfers responsibility to the nurses. This decision-making can lead to the psychological destruction of nurses (Shirey, 2005) in ethical dilemmas.

Institutional factors may influence the application of transformational style in ethical dilemmas when nurse managers make decisions. Nurse managers are role models

Table 5: Stepwise regression results: Consequences of applied leadership styles in ethical dilemmas when nurse managers make decisions

Predictors: Autocratic, laissez-faire, bureaucratic, coaching (supervisory), charismatic, democratic (participative), affiliative (particular), sustainable, authoritative and transformational leadership styles, personal features, work position and institutional factors

Stepwise regression model summary

Predictors in 5th step of stepwise regression model with included coefficients: Affiliative (particular), authoritative (expert) and transformational leadership styles; personal features and institutional factors

Dependent variable: Professional authority experiences of nurse manager

R	R^2	Adjusted R^2	SE of the estimate
0.682	0.465	0.455	0.56625

ANOVA

Model: 5th regression step	Sum of squares	*df*	Mean square	*F*	Sig.
Regression	75,757	5	15.151	47.253	0.000
Residual	87,215	272	0.321		
Total	162,927	277			

Coefficients

Model: 5th regression step	Standardised coefficients: beta	*t*	Sig.
Affiliative (particular) leadership style	0.175	2.203	0.028
Transformational leadership style	0.266	3.610	0.000
Personal features	0.239	4.105	0.000
Authoritative (expert) leadership style	0.199	2.558	0.011
Institutional factors	–0.128	–2.336	0.020

Predictors in 5th step of stepwise regression model with included coefficients: Bureaucratic, sustainable and transformational leadership styles; personal features; institutional factors

Dependent variable: Satisfaction of professional needs of the nurse manager

R	R^2	Adjusted R^2	SE of the estimate
0.631	0.398	0.387	0.44189

ANOVA

Model: 5th regression step	Sum of squares	*df*	Mean square	*F*	Sig.
Regression	35,102	5	7.020	35.952	0.000
Residual	53,113	272	0.195		
Total	88,215	277			

Coefficients

Model: 5th regression step	Standardised coefficients: beta	*t*	Sig.
Transformational leadership style	0.256	3.325	0.001
Personal features	0.398	6.640	0.000
Institutional factors	–0.179	–3.091	0.002
Bureaucratic leadership style	0.118	2.345	0.020
Sustainable leadership style	0.115	2.104	0.036

(Continued)

TABLE 5: CONTINUED

Stepwise regression model summary				ANOVA						Coefficients			
Predictors in 5th step of stepwise regression model with included coefficients: Coaching (supervisory), sustainable and authoritative (expert) leadership styles; personal features **Dependent variable:** Improvement of nurse manager's competencies										**Model: 4th regression step**	**Standardised coefficients: beta**	***t***	**Sig.**
R	***R*²**	**Adjusted *R*²**	**SE of the estimate**	**Model: 5th regression step**	**Sum of squares**	***df***	**Mean square**	***F***	**Sig.**	*Authoritative (exprt) leadership style*	0.248	3.504	0.001
0.765	0.585	0.579	0.49936	Regression	95,893	4	23.973	96.139	0.000	*Personal features*	0.251	5.606	0.000
				Residual	68,075	273	0.249			*Sustainable leadership style*	0.236	3.518	0.001
				Total	163,968	277				Coaching (supervisory) leadership style	0.190	3.189	0.002
Predictors in 5th step of stepwise regression model with included coefficients: Coaching (supervisory), charismatic and sustainable leadership styles; personal features; institutional factors **Dependent variable:** Improvement of nurse manager's managerial competence										**Model: 5th regression step**	**Standardised coefficients: beta**	***t***	**Sig.**
R	***R*²**	**Adjusted *R*²**	**SE of the estimate**	**Model: 5th regression step**	**Sum of squares**	***df***	**Mean square**	***F***	**Sig.**	Coaching (supervisory) leadership style	0.192	2.801	0.005
0.671	0.450	0.439	0.50749	Regression	57,222	5	11.444	44.437	0.000	*Charismatic leadership style*	0.210	3.305	0.001
				Residual	70,053	272	0.258			*Personal features*	0.280	4.663	0.000
				Total	127,275	277				*Sustainable leadership style*	0.227	3.481	0.001
										Institutional factors	–0.158	–2.872	0.004
Predictors in 5th step of stepwise regression model with included coefficients: Autocratic, bureaucratic, democratic (participative) and sustainable leadership styles; personal features **Dependent variable:** Satisfaction of patients and their relatives' needs										**Model: 5th regression step**	**Standardised coefficients: beta**	***t***	**Sig.**
R	***R*²**	**Adjusted *R*²**	**SE of the estimate**	**Model: 5th regression step**	**Sum of squares**	***df***	**Mean square**	***F***	**Sig.**	*Autocratic leadership style*	0.313	5.770	0.000
0.723	0.523	0.514	0.68336	Regression	139,015	5	27.803	59.538	0.000	Sustainable leadership style	0.173	2.641	0.009
				Residual	127,019	272	0.467			*Personal features*	0.181	3.751	0.000
				Total	266,035	277				*Bureaucratic leadership style*	0.182	3.448	0.001
										Democratic (participative) leadership style	0.161	2.380	0.018

for nurses. This role modelling fosters the development of their sense of professional and organisation identity. Transformational leadership seems to be appropriate from the staff perspective in ethical dilemmas (Rosengren et al., 2007).

The application of authoritative leadership in ethical dilemmas is a premise to satisfy nurses' professional needs. In the satisfaction of nurses' needs the nurse manager creates opportunities for them to experience professional confidence as they apply their expertise (Rosengren et al., 2007).

These research findings demonstrate that the application of autocratic or charismatic leadership styles in ethical dilemmas presupposes the satisfaction needs of patients' relatives. This could be also interpreted as distrust in nurses on the ward regarding speedy decision-making in ethical dilemmas (Silén et al., 2008).

These outcomes show that the satisfaction of the needs of the ward requires the application of one of the following leadership styles in ethical dilemmas, autocratic or bureaucratic. To meet these ward needs, nurse managers focus on their own personality, professional confidence and authority, strictly adhering to the organisational rules and policies. Nevertheless, in this context tensions about values, interests and power are emerging (Prilleltensky, 2000).

Different leadership styles affect the improvement of nurse managers' competencies in different ways. The application of sustainable leadership means that the nurse manager must demonstrate the ambition to integrate intrapersonal, organisational, societal and environmental aspects through interactions and communication. The application of authoritative leadership means that the nurse manager relies on personal and professional expertise when making decisions in ethical dilemmas (Drach-Zahavy & Dagan, 2002).

These findings suggest that nurse managers' expertise is needed to manage ethical dilemmas by accepting and adjusting to the situation and seeking support from colleagues (Severinsson & Hummelvoll, 2001). Then nurses could draw inspiration from the nurse manager to enhance their morale, identity, motivation and performance (Cooper et al., 2002).

These research findings show that transformational leadership and personal characteristics have an association with experience of professional authority, satisfaction of professional needs, and improvement of multidisciplinary competencies among nurse managers. The results are meaningful as nurse managers are expected to perform key functions such as clarifying values, promoting personal harmony among nurses, enhancing consensus among nurses, patients and other personnel, and confronting groups subverting values (Prilleltensky, 2000).

Limitations

This study has a number of limitations that affect the interpretation of the results. The results reflect the perceptions of the managers. Because of the limited number of hospitals, the generalisability of the findings may be limited to settings similar to those used in our study (Parahoo, 2006). The research was limited to one country and to nurse managers on hospital wards. In order to assess the generalisability of the findings and test the instrument developed for this study in greater detail, the research should be done in other clinical contexts and in other countries.

Implications for nursing

The study adds to the understanding of reasons and consequences of applied leadership styles in ethical dilemmas when nurse managers make decisions. Nurse managers' leadership styles define their values and perspective, and being aware of it will aid their communication those they work with (Forest & Kleiner, 2011). Research findings show that nurse managers need skills and knowledge to lead decision-making in ethical dilemmas. Units, employees, contexts and situations differ and there is no one and only correct leadership style (Vesterinen et al., 2013). Nurse manager's ability to reflect on their own behaviour makes it easier to regulate the leadership style in different ethical dilemmas.

The leadership styles, taken individually by nurse managers, appear to have a direct and unique impact on the working atmosphere (Goleman, 2000) of a nursing team. The research indicates that nurse managers do not rely on only one leadership style. The decision-making and application of leadership styles in ethical dilemmas are related to contextual and situational considerations. The advantage

to understanding of reasons and consequences of applied leadership styles in ethical dilemmas is that nurse managers understand their strengths and weaknesses and reflect on contexts and situations. Nurse managers can be more effective as leaders by strategically using their strengths and counteracting their weaknesses (Abualrub & Alghamdi, 2012).

The findings of this research could be applied in the improvement of nursing management and leadership, problem-solving and decision-making practices in ethical dilemmas. It is important that nurse managers have peer groups and mentors for helping them to develop as leaders, managers (Vesterinen et al., 2013) and decision-makers. It is important to arrange enough updating education to support nurse managers in their leadership and decision-making.

The findings could also be applied in nursing education, and could be the premises for development of further research in nursing management specifically and in health sciences (e.g., public health), and social sciences (e.g., behavioural sciences, organisational sciences, psychology, and management) generally. Hospitals should draw up visions of nursing leadership and management in the future. Together with colleges and universities should initiate nurse manager education programmes that focus on leadership styles and ethical dilemmas in nursing management, decision-making issues and challenges in nursing leadership, job satisfaction, and how nurse managers consider their own and nurses' wellbeing.

Conclusions

The applied leadership styles depend upon the situation and context of an ethical dilemma. The interactive nature of leadership makes decision-making in ethical dilemmas a challenge for nurse managers. The results show that transformational leadership is associated with the professional authority of the nurse manager, and the other leadership styles such as authoritative, sustainable, and charismatic, are related to improvement of the competencies of nurse managers.

The understanding of associations between reasons and consequences and the application of different leadership styles, when nurse managers make decisions in ethical dilemmas, is a valuable instrument for improving ethical nursing management, and contributes positively to patient-centred decisions. For nurse managers, it is meaningful to involve nursing personnel in decision-making within ethical dilemmas. This involvement ensures that staff nurses have greater influence on, and concern about, the ethics of their practice.

Nurse managers exhibited leadership styles orientated to maintenance, focussing more on the 'doing the job' than on managing decision-making in ethical dilemmas. The results show the need for nurse managers to improve their competencies with the focus on the application of different leadership styles according to their strengths and weaknesses.

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Conflict of interest

The authors report no conflict of interest.

Author contributions

Vilma Zydziunaite and Tarja Suominen were involved in the study's design, data analysis, manuscript preparation, and critical reviews. Vilma Zydziunaite performed literature review, quantitative data collection and analysis. Vilma Zydziunaite and Tarja Suominen have approved the final version of the manuscript.

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