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Management and leadership competence in hospitals: a systematic literature review

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Abstract

Purpose – The purpose of this study is to describe the characteristics of management and leadership competence of health-care leaders and managers, especially in the hospital environment. Health-care leaders and managers in this study were both nursing and physician managers. Competence was assessed by evaluating the knowledge, skills, attitudes and abilities that enable management and leadership tasks.

Design/methodology/approach – A systematic literature review was performed to find articles that identify and describe the characteristics of management and leadership competence. Searches of electronic databases were conducted using set criteria for article selection. Altogether, 13 papers underwent an inductive content analysis.

Findings – The characteristics of management and leadership competence were categorized into the following groups: health-care-context-related, operational and general.

Research limitations/implications – One limitation of the study is that only 13 articles were found in the literature regarding the characteristics of management and leadership competence. However, the search terms were relevant, and the search process was endorsed by an information specialist. The study findings imply the need to shift away from the individual approach to leadership and management competence. Management and leadership need to be assessed more frequently from a holistic perspective, and not merely on the basis of position in the organizational hierarchy or of profession in health care.

Originality/value – The authors' evaluation of the characteristics of management and leadership competence without a concentrated profession-based approach is original.

Keywords Health care, Health leadership competencies, Leadership, Hospitals, Management, Literature review

Paper type Literature review

Introduction

The requirements for, and contents of, health-care management and leadership competence are constantly changing due to several contemporary and future challenges. Examples of factors promoting the need for competence development in management and leadership include: transition and reform in the delivery of services by health-care

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organizations, increasing demands for performance improvement and performance profile comparisons, changed expectations of patients and, in the European Union, the issues of health-care integration and cross-border care (Wismar *et al.*, 2011; Busari, 2012; Tchouaket *et al.*, 2012). Additionally, the expectations of a new generation of employees differ from older generations' expectations, and therefore, the future workforce requires a novel managerial approach (Stanley, 2010; Piper, 2012; Coulter and Faulkner, 2014). The aim of this study is to describe the characteristics of management and leadership competence in health-care leaders and managers, especially in a hospital setting, from a holistic perspective. Health-care leaders and managers included both nursing and physician managers. Therefore, this paper focuses on a competence-based approach of managers and leaders instead of merely the profession-centered viewpoint, even though the profession-centered approach is dominant in previous studies.

Management and leadership competence in this study signifies knowledge, skills, abilities and attitudes that are necessary for managerial levels and tasks in hospitals or clinical settings. The definition of competence has become complex, and scientists have not yet arrived at a general consensus. Various definitions of competence have formed in several disciplines, and in health care, the definitions have arisen from a professional perspective. Furthermore, one approach to competence in the literature is context dependent, and related definitions of competence include personal capabilities to use and link knowledge, skills and attitudes to develop performance in a particular context (Laibhen-Parkes, 2014). Usually, to be deemed competent, a person must demonstrate a master set of skills; however, scholars have not reached an agreement on this definition (Thistlethtwaite *et al.*, 2014). Knowledge and skills are overtly and indisputably stated as inherent components, while abilities and other attributes are merely implied. In sum, attitudes, abilities, values, judgment and personal or character attributes are considered characteristics of competence. Additionally, two divergent conceptions about the utilized components of competence by a competent person were found. One conception focuses on selected, individual components of competence in a specific situation. The second describes a synergistic combination of the components in a given situation (Fernandez *et al.*, 2012). One definition of competence concentrates on the interaction between the person working and abilities actually applied while at work, but this varies because of the possibilities and limitations of the work environment (Ruohotie, 2006).

The recent need for management and leadership competence in health care and the appeal of management and leadership as a career choice are contemporary challenges (Ackerly *et al.*, 2011; Enterkin *et al.*, 2013; Yoder-Wise, 2014). Attempts to develop health-care managers and leaders have been described as inadequate and contradictory (McCallin and Frankson, 2010; Ackerly *et al.*, 2011; Townsend *et al.*, 2012). Management and leadership exceed the scope of the physician's role especially; thus, management and leadership competence proves to be deficient (Dickinson *et al.*, 2013; Kuhlmann and von Knorring, 2014). In recent decades, studies have demonstrated numerous approaches to and theories of management and leadership involving personal characteristics, behaviors, styles, models, theories and functions. At present, process-based management with the lean approach and competence-based management are emphasized (Hasna, 2014; Tevameri, 2014). Supportiveness and functionality in the work environment of health-care professionals can be achieved by effective clinical leadership, but as a conception, it has no clear definition (Mannix *et al.*, 2013).

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Typically, management and leadership roles in health care are profession-based; physicians and nurses receive a different education, and they learn unique models of leadership and management. Additionally, studies of management in hospitals or clinical settings across the globe produce critical results, demonstrating inadequate management and leadership competence, which have been under discussion worldwide (Pillay, 2008; McCallin and Frankson, 2010; Ackerly *et al.*, 2011; Townsend *et al.*, 2012). Deeply institutionalized organizational routines, professionalism and growing specialization within the boundaries of clinical departments are absolutely strong cultural features in hospitals that affect management and managerial work (Fältholm and Jansson, 2008). As a solution, organizational management and leadership trainee programs and clinical supportive supervision have been implemented to promote the management and leadership role. In challenging professions, managerial work requires indispensable management skills. Also, clinical expertise needs to be strengthened by management and leadership competence (McCallin and Frankson, 2010). Conflictingly, the competence-based approach to leadership and management has not been unconditionally accepted. Formal programs to develop management and leadership competence have not been as remarkably influential as informal approaches used, for instance, by mentors and coaches (Pillay, 2008; McCallin and Frankson, 2010; Straus *et al.*, 2013). Competence-based leadership development programs for clinicians have been established in Europe, the USA and Canada (Jahrami *et al.*, 2008; Ackerly *et al.*, 2011; Berkenbosch *et al.*, 2013b), as exemplified by the Medical Leadership Competency Framework (MLCF) and the Royal Australasian Medical Management Framework.

In sum, literature about the characteristics of management and leadership competence in health care is surprisingly limited. So far, systematic reviews that combine the views of professional groups in this field are scarce. In this paper, our approach to management and leadership competence, in light of a modern organizational theory, is to explore and discuss them from a holistic perspective.

Methods

We used systematic literature review to identify studies that described diverse types of management and leadership competence in health care, particularly those carried out in hospitals, during a certain time period. Data collection included searching and selecting articles from relevant electronic databases, as comprehensively outlined by Fink (2005). An information specialist was consulted about search terms and the process. After careful consideration and some initial searches, the following electronic databases were selected: Cinahl, PubMed, Cochrane, Scopus, Web of Science and Finnish Medic. The search period spanned a decade (2003-2013) because during this period, literature regarding the competence-based approach to management and leadership increased dramatically. The past decade provided opportunities to compare the studies and explore noticeable trends and trajectories regarding management and leadership competence.

The search limits included reviews or research articles in English and Finnish with titles related to the study topic. After evaluating studies with relevant titles and abstracts (if they were previously available), the search outcome decreased from 1,451 to 253 papers. The studies remaining, which comprised empirical research, theoretical models of the characteristics of competence or literature reviews, described diverse characteristics of management and leadership competence in hospitals or clinical

settings (see inclusion criteria in Figure 1). A more detailed examination of the abstracts and full texts of these papers revealed those that offered a diverse range of descriptions of knowledge, competence or skills needed in management. Criteria were set to exclude editorials, evaluations or descriptions of management and leadership competence education or developed models and papers with constricted perspectives of

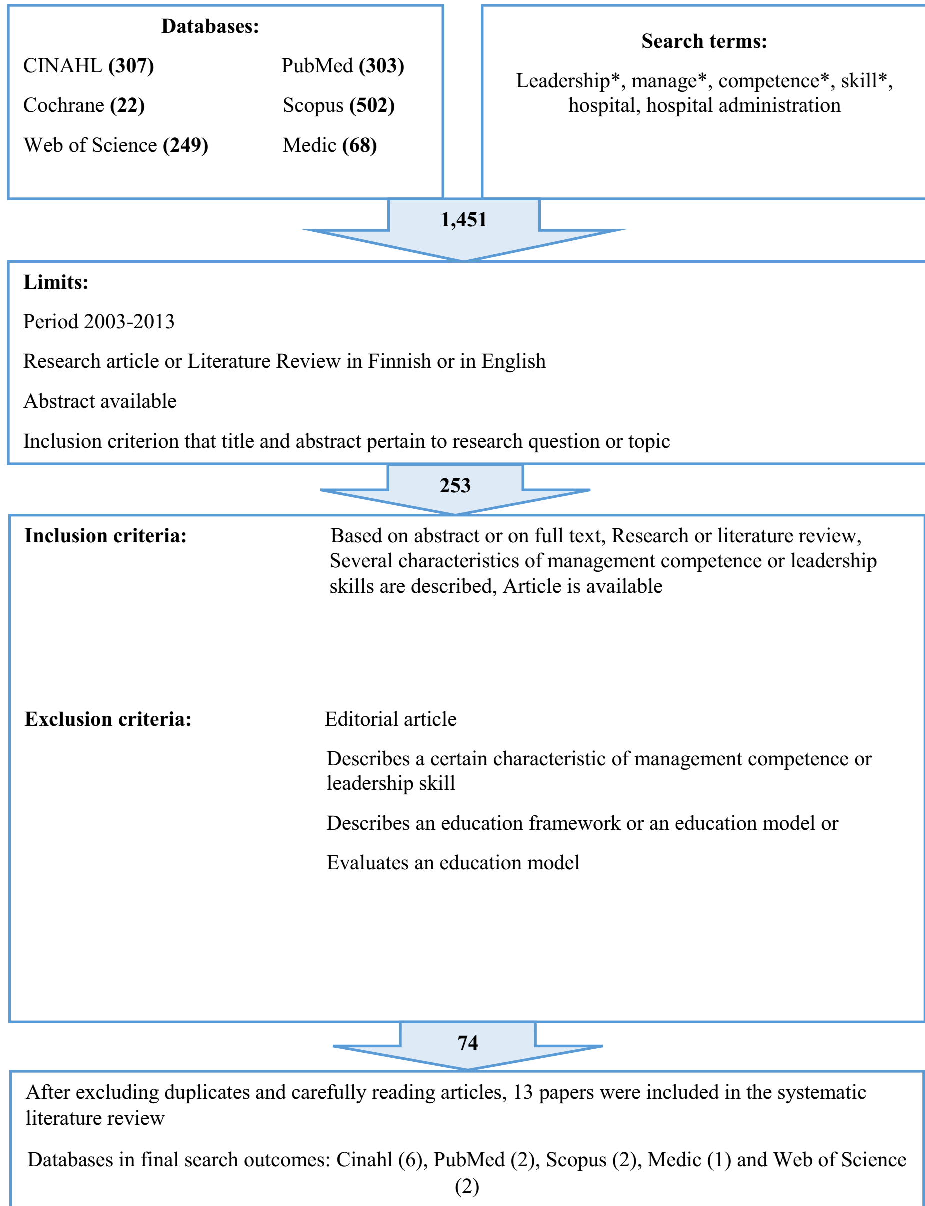

Figure 1.
Process of data collection

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management competence. Because our focus was on the characteristics of management and leadership competence and how to describe and identify them, studies concerning models or evaluations were excluded if they lacked descriptions of diverse characteristics of management and leadership competence. Replicating the search in each electronic database using combined search terms produced the same outcomes. Figure 1 describes the search process used, along with inclusion and exclusion criteria, and the outcomes after each stage.

The number of search outcomes was curtailed from 74 to 13 after thoroughly reading the papers in full and eliminating duplicates. However, surprisingly, the fewer outcomes were appraised carefully and the selected papers, from PubMed (two), Cinahl (six), Scopus (two), Web of Science (two) and Medic (one), met the criteria precisely. Later examination of the selected studies identified mainly surveys, four of which were executed with the Delphi method, and one study design was a structured interview. After the search process, the findings were accepted as focused and precise content for the aim of this paper, with accompanying discussion. The papers included are presented in chronological order in Table I.

The material was subjected to inductive content analysis to assess the data on the diverse characteristics of management and leadership competence, especially in a hospital context. During the first stage, competence and skills, identified as characteristics from the studies, were classified into concepts using words that described the data (Elo and Kyngäs, 2008). Many words and even short phrases, such as "using financial information", were used, and several similarities were found during analysis. These words and clauses were organized into synonymous groups and, then, further analyzed and regrouped into 13 separate sub-categories. Finally, the sub-categories were assigned to three major categories relating to the characteristics of management and leadership competence.

Findings

In this study, three main categories of leadership and management competence emerged: health-care context-related, operational and general. Each category consisted of sub-categories of related sections.

Health-care context-related management and leadership competence

The health- care context-related competence category was broken down into four sub-categories: *social, organizational, business and financial* competence. *Social competence* included knowledge and understanding of the laws, roles and different functions of the political, social and legislative systems. The level of a manager or leader in the organization, characterized by varying degrees of rigor and scope, determined whether any of these systems formed part of managerial operations. *Social competence* was observed mainly in European studies (Hennessy and Hicks, 2003; O′Neil *et al.*, 2008; Berkenbosch *et al.*, 2013a). Additionally, Sinkkonen and Taskinen (2003) showed that the health services quality and cost efficiency approach to investigating health policy and health-care development proved a topical challenge in Finland.

Organizational competence and related skills are more obviously related to management and leadership. This sub-category included managers' organizational tasks and work content. In the studies analyzed, competence was represented as knowledge and understanding of organizational functions, relationships and

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Table I.
Summary of previous studies of management competence

Authors	Aim	Design and respondent pool	
1. Conelly *et al.* (2003) USA	To identify charge nurse competencies	Interviews Delphi n = 42	Charge Nurses, Head Nurses, Staff Nurses, Supervisory personnel
2. Hennessy and Hicks (2003) UK	To identify the most relevant characteristics considered necessary for working as a Chief Nurse to inform and systematize recruitment	Delphi Round 1 n = 330 Round 2 n = 180	15 key experts in each of 22 European countries
3. Kleinman (2003) USA	To obtain perceptions of the roles, competencies and educational foundation required from nurses in mid-level and senior nursing management roles	Survey questionnaire n = 35 n = 93	Nurse Managers, Nurse Executives
4. Sinkkonen and Taskinen (2003) Finland	To identify and figure out management competencies needed at different management levels for developing nursing management and management education	Survey n = 604	Nurse Managers in Primary and Secondary Health Care
5. Sherman *et al.* (2007) USA	To explore the contemporary nurse manager role and to gain perspective on the critical leadership skills and competencies required to build a nursing leadership model	A structured face-to-face interview n = 120	Nurse Managers
6. O'Neil *et al.* (2008) USA	To ensure that assets are used in the most effective manner and required skills and expectations to lead are used	Two types of data: A telephone survey n = 27; A paper survey n = 54	Chief nursing leaders in three broad settings: Hospitals (n = 20), Education (n = 16), Public health (n = 18)
7. Palarca *et al.* (2008) USA	To forecast relevant competencies and important skills, knowledge and abilities for Navy Nurse Executives in the next five to ten years	Delphi – 2 iterations: An electronic questionnaire n = 38 Questionnaire via email n = 93	Senior Navy Nurses holding the rank of Captain 0-6
8. Furukawa and Cunha (2011) Brazil	To characterize the profile of nurse managers at accredited hospitals, identify strategies used to select these professionals and compare the opinions of nurse managers and those hierarchically above them relative to the competencies of these nurse managers as viewed by their superiors	Questionnaire n = 24 (13 + 11)	Nurse Managers, Directors
9. Kang *et al.* (2012) Taiwan	To assess the level of and the differences in managerial competencies, to determine the best predictors of managerial competencies for NAS	Cross-sectional survey, self-administered questionnaire n = 330	Head Nurses, supervisors, Deputy Directors, Directors of Nursing in 16 acute hospitals
10. Lorber and Savič (2011) Slovenia	To compare nursing leaders and employees' perceptions of leadership style, personality characteristics and managerial competencies and to determine the associations between these factors	Structured questionnaire survey n = 509	Employees in Nursing, Nursing Leaders

(*continued*)

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Authors	Aim	Design and respondent pool	
11. Citaku *et al.* (2012) Australia, Canada, Germany, Switzerland, UK and USA	To identify and empirically investigate the dimensions of leadership in medical education and health-care professions	Questionnaire via email survey n = 229	Educators, Physicians, Nurses, Other health professionals with academic positions
12. Berkenbosch *et al.* (2013a) Netherlands	To investigate how medical specialists perceive the managerial competencies of medical residents and their need for management education	Questionnaire via email survey n = 129	Medical specialists
13. Hazelbaker (2013) USA	To begin to explore the knowledge, skills and abilities needed in the emerging practice settings of health-care management	Directed surveys, Delphi n = 8	Athletic Trainers working as Hospital or Health care Managers

Table I.

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decision-making systems (Connelly *et al.*, 2003; Kleinman, 2003; Sinkkonen and Taskinen, 2003; Hazelbaker, 2013). *Business competence*, a notable sub-category, included knowledge, understanding and practice of business skills in clinical and cultural contexts as well as different types of processes, such as changes, services, development, resources and planning (Kang *et al.*, 2012; Hazelbaker, 2013). Some studies demonstrated an awareness of health care as a business or industry, and in a wider context than finance, including development of services and resources, productivity and effectiveness (O′Neil *et al.*, 2008; Berkenbosch *et al.*, 2013a). *Financial competence* included knowledge and understanding of, and skills related to, financial, marketing and budgeting issues and the ability to manage them successfully; these components emerged from several studies (Connelly *et al.*, 2003; Kleinman, 2003; Sinkkonen and Taskinen, 2003; Sherman *et al.*, 2007; O′Neil *et al.*, 2008; Palarca *et al.*, 2008). *Financial competence* was considered essential for nurse managers' work (Sherman *et al.*, 2007).

Operational management and leadership competence

The second category, *operational competence*, encompassed the following sub-categories: *process, operation, clinical and development competence*. *Process competence* comprised items such as improvements in quality and service processes and management of and focus on patients (Connelly *et al.*, 2003; O′Neil *et al.*, 2008; Furukawa and Cunha, 2011, Lorber and Savič 2011; Berkenbosch *et al.*, 2013a).

Operation competence included the ability to manage a ward using clinical skills (Berkenbosch *et al.*, 2013a). The importance of thoroughly knowing and understanding operations and available resources, executive tasks and abilities to delegate were constituent attributes of this sub-category (Furukawa and Cunha, 2011; Lorber and Saviè, 2011). Leadership skills (Hennessy and Hicks, 2003; Furukawa and Cunha, 2011; Kang *et al.*, 2012; Berkenbosch *et al.*, 2013a; Hazelbaker, 2013) and operational management abilities, such as resource allocation (Berkenbosch *et al.*, 2013a), were also included in this sub-category.

Clinical competence included the knowledge and skills of professional and clinical operations issues and professional credibility (Connelly *et al.*, 2003; Hennessy and Hicks, 2003; Sherman *et al.*, 2007), specialists' requirements and current medical knowledge (Berkenbosch *et al.* 2013a). Professional ethics and learning from mistakes and failures were also included (Sherman *et al.*, 2007; Berkenbosch *et al.*, 2013a).

Development competence encompassed staff development and improvement abilities in work. It involved the ability to obtain and use information (Connelly *et al.*, 2003; Sinkkonen and Taskinen, 2003; Palarca *et al.*, 2008; Furukawa and Cunha, 2011; Citaku *et al.*, 2012). A proactive approach to unit, clinical and organizational changes and impacts was also included (Sherman *et al.*, 2007; O′Neil *et al.*, 2008; Palarca *et al.*, 2008).

General management and leadership competence

The third category, *general management and leadership competence*, was common to all the health-care professionals, and included the following sub-categories: *time management, interpersonal skills*, *strategic mindset*, *thinking and application skills and human resource management*. *Time management* involved scheduling ability and skills in managing both time and tasks (Sinkkonen and Taskinen, 2003; O′Neil *et al.*, 2008; Kang *et al.*, 2012; Hazelbaker, 2013). *Interpersonal skills* were strongly linked to management and leadership, and included communication and the building and

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maintenance of interpersonal relationships. These were described mainly as management and leadership competence in all studies, but descriptions varied and consisted of elements such as: teamwork skills, decency, integrity, inter-personal skills, relationship building, relating to people and development of collaborative relationships within the organization. In nine papers, communication skills were described with diverse attributes like: communication, conformation to the flow of information, networking, written and oral fluency and clarity and active listening to and facilitation of discussion (Connelly *et al.*, 2003; Hennessy and Hicks, 2003; Sinkkonen and Taskinen, 2003; Sherman *et al.*, 2007; Palarca *et al.*, 2008; Furukawa and Cunha, 2011; Lorber and Saviè, 2011; Citaku *et al.*, 2012; Kang *et al.*, 2012). Additionally, O′Neil *et al.* (2008) listed communication skills in conjunction with strategy, vision and mission.

Strategic mindset entailed notable competence in strategic thinking, strategic process and vision and strategy development. The word "strategic" was combined with "thinking", "planning", "task management", "view", "goals", "vision" and "mission", and in a few papers, neither "strategy" nor "strategic" were observed (Sinkkonen and Taskinen, 2003; Connelly *et al.*, 2003; Kang *et al.*, 2012; Berkenbosch *et al.*, 2013a; Hazelbaker, 2013). The *strategic mindset* sub-category also highlighted the level at which the manager operated, which varied from motivating staff to accomplishing the mission and strategic planning. Analytical thinking, achievement orientation and ability to communicate strategy, vision and mission were all included in the *strategic mindset* sub-category (Hennessy and Hicks, 2003; Kleinman, 2003; Sherman *et al.*, 2007; O′Neil *et al.*, 2008; Palarca *et al.*, 2008; Furukawa and Cunha, 2011; Lorber and Savič, 2011; Citaku *et al.*, 2012).

Thinking and application competence contained abilities to think critically, prioritize, multi-task and use information in decision-making and problem-solving. Abilities to receive and present constructive feedback and skills in conflict resolution were also described in studies, and were sub-categorized in the *general competence of management and leadership* category. Personal development skills, such as self-awareness, strategic focus, upheld integrity and personal mastery, were also mentioned in papers (Hennessy and Hicks, 2003; Sinkkonen and Taskinen, 2003; Sherman *et al.*, 2007; O′Neil *et al.*, 2008; Citaku *et al.*, 2012; Kang *et al.*, 2012; Hazelbaker, 2013).

Human resource management (HRM) involved the development and management of human resources and mastery of personnel. *HRM* was usually described as one of the main aspects of management and leadership competence, and was most often demonstrated in nursing management studies (Sinkkonen and Taskinen, 2003; Kleinman, 2003; Sherman *et al.*, 2007; Palarca *et al.*, 2008; Lorber and Savič, 2011; Kang *et al.*, 2012).

Discussion

The objective of this study was to describe the characteristics of management and leadership competence as seen in health-care leaders and managers, especially in hospital environments. The approach included contemplation of the perspectives of several health-care professions as well as health management science. For this study, competence included knowledge, skills, attitudes and abilities that enable management and leadership tasks. The literature review was limited to the years 2003-2013 when competence-based research approaches became more frequent in management and

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leadership contexts. This period provided opportunities to compare the studies and to explore noticeable trends and trajectories for management and leadership competence in health care.

We used inductive content analysis to gather data from 13 papers that were selected using systematic literature review. Based on our findings, competence could be broken down into three main categories: health-care context-related, operational and general competence. Knowledge was the most frequently described characteristic, but skill, ability and attitudes were also depicted, albeit not as clearly.

Managerial roles requiring health-care context-related competence comprised social, organizational and financial dimensions. Health-care reforms have been implemented in several countries. Because of the restructuring of public services, many European countries have adopted market-like mechanisms and managerial models and techniques from the private sector. This new managerialism, which enhances innovation, creativity, competencies and staff participation in strategic issues, has made knowledge of rules or bureaucratic procedures less relevant (Byrkjeflot and Jespersen, 2014). Additionally, contemporary integration objectives (Wismar *et al.*, 2011) and trends to reorganize hospitals as process-based structures are challenging the traditional course of action (Tevameri, 2014). In sum, managerial roles and the development of management and leadership competence have been under discussion in many countries with divergent health-care systems and funding.

Within the category of operational competence, process, operation, clinical and development competence proved important for the managerial role, based on analysis of different functions described in the selected literature. However, a common unsatisfactory experience of new nurse managers has been an appointment to the management role without possession of adequate skills (Townsend *et al.*, 2012). Similar to this, the majority of medical residents in The Netherlands, Denmark, Canada and Australia needed training to develop management competence (Berkenbosch *et al.*, 2013b). According to one nursing science study, systematically observed strategies for enhancing nursing management and leadership competence are lacking (Kleinman, 2004). Seven years later, as Kantanen *et al.* (2011) have shown, the situation remains unchanged. However, the challenges proved similar when both medical and nursing studies were observed. For example, managerial positions and roles were described quite differently from clinical roles, and the need for knowledge, skills and attitudes was identified (Ackerly *et al.*, 2011; Townsend *et al.*, 2012).

General management and leadership competence, which comprised time management, inter-personal skills, strategic mindset, thinking and application skills and human resource management, was notable and common to all the studies. Findings about industry-specific, technical and general types of competencies also fell into this category (Aitken and von Treuer, 2014). Because tasks and responsibilities vary by level within the organization, the need for and application of competence also vary for different managers (McGurk, 2010). At all organizational levels, managers require leadership skills to motivate employees and inform them of objectives. Development programs pertaining to managerial levels and organizational strategy are shown to increase the impact of management and leadership (McGurk, 2010). Perspectives on leadership and management education and development in the most recent studies analyzed centered on profession-based and individual approaches (Furukawa and

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Cunha, 2011; Lorber and Savič, 2011; Citaku *et al.*, 2012; Kang *et al.*, 2012; Berkenbosch *et al.*, 2013a; Hazelbaker, 2013).

Boundaries between professions have been a strong cultural feature primarily found in hospitals and clinical settings (Fältholm and Jansson, 2008). Additionally, boundaries were observed between medical specialties in Sweden during the implementation of process orientation. One visible effect of boundaries is that it has been more difficult to change professional cultures than to transform management structures (Ackroyd *et al.*, 2007). As a signal of changing convention, hospital reforms in Norway have increasingly aimed to create stronger management positions with less professional influence, and the managerial role has become more of the focus (Nordstrand Berg, 2014). Evidently, the tradition of the medical profession has not involved support for physicians related to management and leadership competence (Clark and Armit, 2008). Physicians value their professional work more so than management, but the perceptions of management as a temporary appointment or a career trap decreased after hospital reform in Norway (Nordstrand Berg, 2014).

The trajectory of the competence-based approach to management and leadership has become noticeable. Our findings from the period we examined demonstrate that in the beginning, the objective of published studies was to identify the characteristics of management and leadership competence, characteristics and different roles needed in nursing managerial positions (Connelly *et al.*, 2003; Hennessy and Hicks, 2003; Sinkkonen and Taskinen, 2003; Kleinman, 2003). Although the study perspectives varied, the objective was common to them all. In Finland, particularly, the managerial involvement of the physician and his or her need for training in managerial skills were apparent (Kumpusalo *et al.*, 2003). In studies published during 2007 and 2008, the aim was to improve the identified characteristics of management and leadership competence by education and training, and to construct a leadership model (Sherman *et al.*, 2007). Moreover, these studies sought to forecast relevant characteristics of management and leadership competence and important skills, knowledge and abilities (Palarca *et al.*, 2008); additionally, the interest in improving management and leadership competence widened, especially in medicine. With the exception of systematized management and leadership education and training, measurement and evaluation of competence also occurred in the research field (Jennings *et al.*, 2007; Calhoun, 2008; Ackerly *et al.*, 2011). Management research extended to health sciences (Citaku *et al.*, 2012; Hazelbaker, 2013), and particularly in medicine, the need for management education has been recognized (Ackerly *et al.*, 2011; Berkenbosch *et al.*, 2013a).

Nowadays, the development of management and leadership competence by formal education is prevalent. However, according to Mintzberg (2004), manager development occurs abundantly through experience and practice, which denotes learning by performing managerial work. The successful managerial role requires change in mindset and attitudes toward skill and knowledge advancement by informal modes. In line with this, informal learning is achieved collectively, with mentors, peers or coaches, and is a method for building the organizational capacity and managerial strategies of an organization (McGurk, 2010) or promoting interactive and problem-based didactics (Taylor *et al.*, 2008). Development, support and training provided to leadership and management roles confirm physicians' abilities to perform managerial work (Dickinson *et al.*, 2013; Straus *et al.*, 2013). In response to a need in the USA and other countries, developed models were published that aimed to concurrently improve the abilities of

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health-care leaders and managers at different levels while they work (Batcheller, 2011) or to include studies as pathways to clinical management and leadership (Ackerly *et al.*, 2011). Systematic production of the best organized leaders and managers is necessary for the future of health care, and requires a plan for achievement (Yoder-Wise, 2014). From organizational and strategic perspectives, the more important question is management and its systematic processes and flexibility, not which profession holds the management position.

Several factors restrict holistic approaches to developing management and leadership competence in health care. Instead of representing managerial work as a task list or profession-based question, a shared strategic mindset in management and leadership at all organizational levels enables managers and leaders to observe management and leadership in health management science from a holistic perspective. Developing a framework for learning in which managers and leaders can work in the organization with adequate support and opportunities to reflect and to evaluate success in their role is a globally shared challenge for health care in the future. Recently, Straus *et al.* (2013) studied the impact of leadership training programs for medical centers; they found modest effects and identified the need for rigorous evaluation of these programs. Essential points to consider include unifying the individual and organizational approaches to developing leadership and management competence, and improving managerial effectiveness in line with the strategies of the organization.

The study design and the methods were carried out rigorously, but the majority of all papers described diverse characteristics of required competence in nurse managers and leaders, reflecting the fact that a larger body of research on management and leadership exists for nursing than for medicine. From the physician managers' and leaders' perspective, the required characteristics of management and leadership competence are similar, but a few papers were found that corroborated this perspective, suggesting a need for further study.

Conclusions

As implied above, the individual approach to leadership and management competence, as well as to organizational and strategic styles, requires an integrated, unified perspective of management that was deficient in the studies analyzed. Furthermore, the majority of the analyzed studies described diverse characteristics of required competence in nurse managers and leaders. Nevertheless, the management and leadership competence required from physician managers are similar, but studies integrating both nursing and physician managers' perspectives were not found, suggesting a need for further studies from a health management sciences approach. Therefore, developing a framework for learning in which managers and leaders can work in the organization, with adequate support and opportunities to reflect and evaluate success in their role, is a globally shared challenge for health care in the future. The framework must include common, non-professional-based elements of management and leadership competence to promote a shared understanding of management and leadership throughout the organization.

In sum, the development of management and leadership competence will strategically and systematically improve general organizational performance and essential managerial functions, and will produce new, motivated, potential managers and leaders. The characteristics of leadership and management competence required for

the future comprise a captivating direction and challenge for further study using novel research methods. Multi-professional groups of experts in the health-care field that would serve as subjects of study might offer more information and varied perspectives on the required characteristics of management and leadership competence methods for developing them in the future.

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