

Improving Nurse Managers' Competencies: A Systematic Review

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Abstract: Nurse managers' competencies greatly influence the quality of services and nursing care. Consequently, the aim of this study is to identify and to define the competencies of nurses working in management roles in the healthcare system so they can undertake their roles effectively. This research used a systematic literature review design and analysed 40 articles. Twenty-five studies were from Europe and 15 from outside Europe. The literature was limited to articles published in English between November 2003 and 2018 that were searched using these keywords: nurse manager, competence, nurses, career plan, improving, assessment tools, clinical competence, professional competence. In this study, six dimensions of nursing managers' competencies emerged: sociodemographics, technical, networking, administrative, staff development, and legal and ethical. This literature review provided scientific evidence for decision makers to consider the implementation of a nurse manager competency system, including leadership development, the redesigning of managers' role, building networks, clinical skills and climbing the career ladder. Future studies are suggested to investigate the usefulness of the competency model for assessing nursing managers' readiness to between job applicants, implement continuing education programmes for nurse managers, and develop and plan their careers.

1 INTRODUCTION

Competence is a critical attribute for safe, ethical, high-quality care (Kendall, Gallagher & Blegen, 2009). It is essential to one's contribution in ensuring healthcare delivery (Flinkman & Salanterä 2015). Competence development has been described as a process that occurs over time (Benner, 2001; Keane, Lincoln, & Smith, 2012). Hence, the process of forming competence, especially for nurses, is not done briefly. There is a sustainable process through education, clinical experience and self-capacity building to reach comprehensive competence.

Nowadays, globalisation and science-tech developments are causing huge changes in the world. Nursing services is an integrative part which is not separate from these changing needs. Thus, this field must undergo improvement and innovation so it does not get left behind. Based on that perspective, nursing organisations must change and review their management models to improve the quality of their service.

The nurse manager has played an important role in health services, especially in the hospital sphere,

since this professional is responsible for managing nursing services and for taking measures that include administration, the delivery of care and teaching–research. The work requirements of nurse managers include nursing management, knowledge and interaction with the entire organisational environment to contribute to an institution's success (Furukawa & Cunha 2011).

Generally, the ability of leaders in health services consists of communication, creating a vision, managing, managing strategies and motivating others, engaging in openness and being approachable, making decisions and becoming role models, knowing their roles, becoming experts and solving problems. However, the definition of competencies has become complex, and there is no consensus among scholars on nurse manager competencies (Kantanen, Kaunonen, Helminen, & Suominen, 2015; Pihlainen, 2016). Moreover, there are various models of nurse manager competency – and in several countries, the nurse manager is not even legally recognised.

Thus, it has become a challenge for nurses and academicians working in nursing to think seriously

about and formulate the vital aspects of nurse managers' competency. Chase (1994, 2010) developed a Nurse Manager Competencies Model that classifies nurse manager competencies into five main categories: human resource skills, technical skills, leadership skills, financial management conceptual skills. The key competencies synthesised by Pihlainen, Kivinen and Lammintakanen (2015) from Chase (2010) found the highest self-reported nurse manager competency ratings included human resource management and leadership. The lowest self-reported nurse manager competencies involved conceptual skills and knowledge. Perhaps critical thinking and problem analysis are not yet entrenched in the nursing profession.

Although there were various literature about nursing competencies, but there were still lack of finding about main dimension of nurse manager in all healthcare setting. This, coupled with a lack of motivation to learn and understand caring concepts, are essential issues for the identity of the nurse manager competencies. Furthermore, the existing studies of nurse manager competencies have analysed only the proficiency level in competencies of nurse managers working in hospitals and neglected the question of why nurse managers differ from each other regarding their management capacity. So this study aims to close this research gap by synthesized the main competencies of nurse manager.

2 METHOD

A systematic literature review was conducted for five months. The researchers used the systematic review for identifying studies to describe diverse types of nurse manager competencies in a clinical setting during a certain time period. This paper focuses on a competence-based approach for leaders and managers, instead of merely the profession-centred view of point, even though the profession-centred approach dominates previous studies.

Searches have probed systematic reviews published in the journal. A review of literature published over the past 15 years uses databases: PubMed, CINAHL, PsycINFO, Scopus, Proquest and EBSCO. The search period spanned 2003 and 2018 because there are dramatically increasing of the amount of the literature regarding the competence-based approach to management and leadership during this period.

The literature was searched using these keywords: nurse manager, competence, nurses,

career plan, improving, assessment tools, clinical competence, professional competence. These words were searched for in combination and individually. The inclusion criteria for the articles were as follows: (1) full paper was publication in English; (2) focus on a nurse manager; (3) focus on a competence and its predictors or determinants, both in all research methods of literature reviews; and (4) a full-text paper. The criteria for excluding articles were as follows: (1) the study was not published as a full paper, (2) lack of reliable or valid testing and (3) publication more than 15 years according the COSMIN checklist (see figure 1). After evaluating studies with relevant titles and abstracts, the researchers identified 40 relevant articles targeting competence and nurse managers. The metodological quality of each study were review. Both of authors (PMS, M) directly filters the titles, abstracts and complete and relevant articles. Then, the researchers independently review each 20 articles and consensus was reached through discussion.

3 RESULT

3.1 Study Characteristics

The systematic review involved 40 studies, which were mainly quantitative and conducted in municipal care, hospitals and all healthcare settings. All level of competence were analysed in all studies. Figure 1 explains the steps according to which databases were searched.

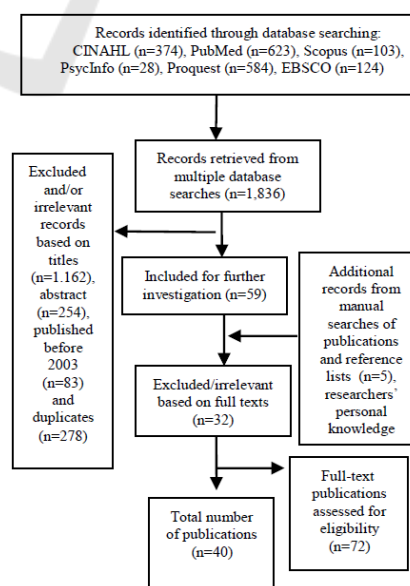


Figure 1: Diagram of database search.

3.2 Study Findings

The findings of this study are summarised in Table 1 in the Table 1 appendix that was extracted from 40 publication printed from 2003 from 2018. In this study, six dimensions of nursing manager competencies emerged: sociodemographics, technical, networking, administrative, developing staff and legal ethics. Each dimension consisted of a nursing manager's explanation of a role concerning related sections.

Sociodemographics. The aspect of sociodemographics aligned with nurse manager competence consists of several aspect such as: age, higher education, the duration of one's work experience, employment status and participation in educational programmes.

Technical. The dimension concerning technical skill includes the planning and delivery of care, therapeutic intervention, ensuring the quality of nursing care, modifying care plans according to individual needs, integration of nursing sciences, IT development and current nursing or healthcare research, and developing effective communication.

Networking. Nurse managers must have networking skills, such as building and managing relationships, interprofessional collaboration, involving stakeholders and community.

Administrative. The next most important competence of nursing managers is administrative skill, which includes the ability to manage financial aspects of the job, allocating and using resources effectively, ensuring cost-effective services and controlling documentation.

Developing staff. The nurse manager must support and develop the nursing staff, providing supervision and coaching for staff, inspiring and motivating, team building and teamwork, knowing employees' needs, empowering staff, managing conflict, providing fair rewards and punishments for staff and arranging the Continuing Professional Development (CPD) for nursing staff.

Legal and ethical. The nurse manager must display competence with laws and ethics to protect nursing services and nursing staff and to safely serve patients. The ability to display legal and ethical competence, such as in decision making, is guided by ethical values, ensuring patient and staff rights, understanding the legal aspect of nursing services, maintaining a nursing code of ethics and staying current with nursing and healthcare policies.

4 DISCUSSION

Competence is determined by one's qualifications, education, skilfulness and experience. In addition, it is judged by a group of people, including colleagues who are specialists or competent in certain practices (Jennings, Mutsch & Schleman 2009). This process includes the determination of clinical competence, whereby nurses are considered competent (Petri & Govern, 2013). Competence is the ability to work properly, so that it is known as the main component of professional standards. Competence is considered the biggest contributor to differentiating managerial effectiveness as seen from expertise, habits and attitudes (McCarthy & Fitzpatrick 2009).

In addition, the competency of nurse managers must be assessed continuously to ensure safe within the scope of the competent delivery of nursing care. Robust and reliable assessment methods are important for assessment to be more objective. Assessment tools represent a particular conceptualisation of competence, both in the nature and range of competences presented and the language used for assessment (Watson et al. 2002). Competency-based career mapping supports health workers' collaborations that can increase patients' safety, ease access and coordinate effective health services, optimise the health of health service providers, share knowledge and skills, as well as escalate roles and communications (Burton 2015).

Three central ideas demonstrate the reasons for differences among nurse managers according to nurse manager competencies: job security, degree of autonomy and executive power in different healthcare organisations (Erjavec & Starc 2017). Competencies are interconnected with education and formal and informal training. Nurses' competencies merit a clear understanding based on the stages. Additionally, higher education is conducted to improve the profession and ensure quality nursing cares.

Human Resources management executes recruitment and maintains the retention of skilful employees so hospitals can provide quality services (Porkodi & Haque 2012). Organisations can reach competitive superiority through their talented, skilful and experienced staff. One way to ensure nurses are working at their maximum performance in working is through the career stages (Shamnot 2014).

The sociodemographic dimension, which consists of variables such as older age, higher education and permanent employment were associated with higher competence for a nurse manager (Flinkman et al. 2016; Wangenstein et al.

2015; Numminen et al. 2017). It is conceivable that a nurse manager who adapts maturely in various situations can think critically, a skill inculcated by education level, and is aware of the need to keep improving their ability and be loyal to the organisation. In addition, there is a correlation between higher self-assessed competence and the length of work experience (Numminen et al. 2017; Flinkman et al. 2016). Nurse managers play vital roles in an organisation. They must ensure nursing delivery and care are implemented according to the rules. They must also possess a science-based education and a minimum competency certificate that will guarantee the community of their proficiency (Kerfoot, 2012). Nurse managers require additional competencies because of the uniqueness of the healthcare environment and conceptual philosophy, since nurses have a social responsibility for the health of individuals, families and communities.

Technical skills are the most important for a manager to possess, especially for the first-line manager. First-line managers (FLMs) must have a comprehensive understanding of a change's implementation so they can facilitate it in their areas of responsibility (Kumah et al. 2016). Even in the research conducted by Kumah et al. (2016), as a group, nurse managers from specific healthcare organisations felt most competent in terms of technical healthcare skills.

The dimensions of technical skill include the planning and delivery of care, therapeutic intervention, ensuring the quality of nursing care, modifying a care plan according to individual needs, integration between nursing science, IT development and current nursing or healthcare research, and developing effective communication. Rapid innovations in science and technology can lead to increased levels of concern in nurses about security and safety of patient and nurse, as well as nurse competency (Karami et al. 2017). Therefore, nurse managers must be responsible for ensuring the quality of nursing delivery care and services. In addition, nurse managers at all levels are asked to integrate concepts regarding current science and technology developments into nursing practice.

Nurse manager roles requiring healthcare, context-related competencies comprise social, organisational, business and financial dimensions. Within the operational category of competencies, they identified technic, process, clinical and development competencies to be a focal point for their managerial role. Communication skills were described with diverse attributes such as: dialogue,

networking, giving a clear information, clarity of written and oral fluency, facilitating discussion and active listening (Furukawa & Cunha, 2011). Additionally, communication skills work in conjunction with the healthcare strategy, vision and mission.

A study in the UK about the development of nurse network managers found they support each other, provide an environment that helps develop ideas and solutions, communicate between members with communication tools and face to face, and vote to influence government policies and strategies (Chapman, 2012). Research in Indonesia found data that internal factors, namely, knowledge, skills, values and external factors (organisational culture) affect the leadership competencies of the head nurse in a hospital. Cultural background in an organization also depends on the nature and the culture of the size and type of organization, the number of employees and senior manager roles. Organizational culture impacts on the effectiveness of nursing care delivery. Culture is a set of shared mental assumptions that guide the way we think, act, and behave in the workplace. Those who do things in the "proper" way will lead to the success of competencies. Those who chose not to do things in the proper way do not last long with an organization. However, the organizational culture is closely associated with senior managers. Every top manager has different expressions and understandings in influencing the culture of the organization. Leadership competencies influence the motivation and performance of nurses.

Healthcare institutions have two customers, that is the internal customer and external customer. Consequently, a healthcare institution must maintain and develop its staff. The implication is that nurse managers have the responsibility to build an effective team, nurse, coach staff through changes, problem solve and provide a reward system for nurses. Nowadays, healthcare is facing the problem in which nurses, especially newly graduated nurses, feel fatigue, insecure and uncomfortable regarding their daily routine as a nurse. Accordingly, the rate of nurse turnover has increased, leading to negative conditions for health organisations and eventually harming nursing delivery care.

Nurse managers must also deal with administration, such as finance and budgeting, allocating and using resources effectively, ensuring cost-effective services and controlling documentation. They often learn experientially to reach a blend of clinical and business management capabilities, often with little to no training and many

other challenges encountered while on the job. Having a clear understanding of the need to develop these skills is critical when selecting managers. However, it is more important when a nurse decide to prepare themselves to be a nurse manager (Chase, 2010).

The important competence that nurse managers must gain is managing ethical and legal issues. The combination of the needs of patients, colleagues and managers may lead to moral stress for nurse managers. Reinforcing the skills of nurses, especially their ethical competency, could be a solution to reduce moral stress, as Källemark-Sporrong et al. declared. In instances where unit managers supported best practices, nurses also experienced them as ethical practices. Above all, this is important since nurses are more likely to leave jobs because of moral stress, combined with lack of managerial support when acting ethically.

5 CONCLUSIONS

A large collection of literature on the competence of nurse managers was found in this search. The author summarised the literature search that made a sincere contribution to the improvement of nurse manager competencies. In this study, six dimensions of nursing manager competencies emerged: sociodemographic, technical, networking, administrative, staff development and legal-ethical.

The results highlighted that nurse manager have to be more committed and more competent to their organisations. However, it is necessary to conduct more comprehensive studies for exploring the gaps in the human resource management of healthcare in different contexts and cultures, especially between Western country (such as Europe and United State) and Eastern country, such as Asia. It is been important thing as cultural background determines the competencies of nurse manager and profile of the organization.

Also, future studies are suggested to investigate the usefulness of the competency model for assessing nursing managers' readiness to between job applicants, implement continuing education programmes for nurse managers, and develop and plan their careers.

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APPENDIX

Figure 1: Diagram of database search.

Author, year	Research design	Competency define
(Flinkman et al. 2016)	Systematic review	There are positive correlation between: age, higher education, duration of work experience, employment status, and participation in educational programmes with competence.
(Yeon et al. 2017)	Quantitative	The clinical competence dimensions were: Scientific, technical, ethical, aesthetic and existential.
(Numminen et al. 2017)	Mixed Method	The 73-item scale consists of seven categories, with responses on a visual analogy scale format.
(Wong et al. 2013)	Qualitative	The major aspects that influencing nurses' decisions to pursue management roles are: - personal demographic (age, education, clinical experience and life circumstances), - personal disposition (intrinsic rewards, professional commitment and leadership skills) and - situation (opportunities of leadership development, perception of manager role perceptions and the presence of mentors).
(Efendi et al. 2018)	Qualitative	Nurses have to emphasize nursing as a thinking profession and highlight clinical knowledge and

Author, year	Research design	Competency define
		competence. Nurses need to affirm their professional identify that can be demonstrated in a number of ways. Nursing has to be view their work as a career and have to be proud to attach the titlle "nurse" to their last name.
(Kumah et al. 2016)	Cross sectional survey	Five important competencies were considered by the first line managers were effective communication, technical competencies, ability to organise staff through change, skill of conflict management, problem solving skills, effective team building and leadership skill.
(Jacob et al. 2008)	Quantitative	Six aspects for effective workplace that were: job autonomy, learning opportunities, supervisor support, coworker team support, involvement in decision making, and flexibility of workplace.
(Erjavec & Starc 2017)	An online survey and in-depth interviews	The competencies of nurse manager are: technical, human resources, conceptual, leadership and financial.
(Karami et al. 2017)	Descriptive analytic study	The competency of nurses in various clinical positions leadership (9 items), were clinical care (10 items), interpersonal relationships (8 items), professional development (6 items), legal-ethical practice (8 items), teaching-coaching (6 items) and research aptitude-critical thinking (8 items).

Author, year	Research design	Competency define
(Gunawan et al. 2018)	literature review	Antecedents to CBHRM in nursing include organizational factors (such as: organizational size, culture, the nature of human resource (HR) department, type of organization, and the number of employee), individual factors (such as competencies of human resource manager, role of top managers, intention, and characteristics), and human resources policy.
(Gunawan & Aunguroch 2017)	Literature review	The attributes of managerial competence include developing self, management function (POSAC), leading, managing legal and ethical issues, and delivering health care. Antecedents to managerial competence are internal and external factors.
(Kvas et al. 2013)	Quantitative	The norms for the competency profiles for three leadership levels in nursing were flexibility at work, creativity, leadership, organizational climate, networking&influencing, realization skills, ethics, interprofessional relationship, positive attitude towards knowledge and education
(Wangensteen et al. 2015)	A cross-sectional design	Competence categories: Planning and delivery of care, Teaching functions, Professional leadership, Research utilization and nursing values and Professional awareness.
(Silva et al. 2018)	Integrative review of articles	The ability of communication in the leadership and

Author, year	Research design	Competency define
		supervision relationship, conflict resolution regarding teamwork, planning in organizations of services, technical competence in professionals' qualification, and prevision and provision of material resources.
(Donaher et al. 2007)	An integrative review	Developing self (16 items), recruiting (11 items), developing others (15 items), utilizing (8 items), retaining (8 items), and managing human capital (58 items)
(Pihlainen et al. 2016)	systematic literature review	The characteristics of management and leadership competence were categorized into the following groups: health-care-context-related, operational and general.
(McCarthy & Fitzpatrick 2009)	A cross-sectional descriptive design	Behavioral indicators are currently being used to assess management skills, design and implement continuing education programs for nurse managers, and provide advice about career development and planning for nurse managers.
(Bjork et al. 2007)	Cross sectional survey design	Managers in cooperation with unit personel should become aware of and develop system to support learning and use of competence.
(Numminen et al. 2017)	Quantitative	Empowerment increased minimally, whereas perceptions of practice environment, ethical climate, and occupational commitment decreased. Empowerment, satisfaction with current job and

Author, year	Research design	Competency define
		quality of care, time from graduation & work experience explained 25.6% of the change in competence.
(Wilkinson 2013)	Systematic literature	A unique set of dimensions of continuing competency are clinical care, leadership, interpersonal relationships).
(Wong et al. 2013)	Qualitative (focus group methodology)	Staff nurses identify aspect of management role: the need for graduate education, development of budget and human resource competencies, heavy workload, large span of control, job insecurity, potential work life imbalance and reduce patient contact
(Titzer & Shirey 2013)	Analysis method	Talent management as a human resources recruiting and retaining strategy whereas succession planning was the responsibility of current leaders
(Onishi et al. 2008)	Qualitative	It is important to focus more attention on qualitative aspect of nurses' professional experience in service education
(Supamane et al. 2011)	Qualitative	Nurses' clinical leadership competencies emerged, comprising hidden characteristics (motive, attitude and values) and surface characteristic (specific knowledge, management & nursing informatics)
(Pillay 2009)	Quantitative	Management competency variables were delivery of health care, planning, organizing, leading, control, legal and ethical issues, and

Author, year	Research design	Competency define
		self management.
(Furukawa & Cunha 2011)	Quantitative	The nurse managers' most frequent competencies according to their superiors were: leadership, focus on patient and teamwork
(Johan Tri Agus Yuswanto 2013)	Qualitative and quantitative research	Expected leader attitude on developed model based on statistical counting and also functioned as competency are mentioned below: good coach for staff, inspirational motivation, team building and team work, institutional structured, knowing staffs' need
(Kerfoot 2012)	Literature review	The ability to use evidence based management and leadership processes is variable based on the rigor of the person's understanding of evidence and research based clinical processes and outcomes
(Kantanen et al. 2017)	Quantitative	Head nurses and directors of nursing evaluated themselves to be most competent in areas of general competence and less competent in the areas of special competence.
(Deyo et al. 2016)	Literature review	It is important to understand the competencies and education required to support nurse manager role
(McCarthy & Fitzpatrick 2009)	Quantitative and qualitative	General competencies for nurse managers: communication and influencing skills, building and managing relationships, integrity, personal commitment, resilience and compsure, service irritation and

Author, year	Research design	Competency define
		innovation, promoting evidence based decision making, practitioner competence and professional credibility
Machell., et al. (2009)	Literature review	Competence gives you the potential credibility that you need with colleagues if they are accept your leadership
(Chapman 2012)	Literature review	Top nurse manager who work in positions of influence with board-level authority
(Widhi Sudariani et al. 2016)	Quantitative and qualitative	Development of leadership competency model can increase the motivation and performance nurse
Mildon, B (2014).	Literature review	Competencies refer to specific knowledge, skills, and personal attributes required clinical nurse specialist practice safely and ethically in a designated role and setting
(Erjavec & Starc 2017)	Qualitative and quantitative	Reasons for nurse managers' differences in proficiency levels are the level of job security, autonomy, and support of the healthcare team.
(Doran et al. 2015)	Quantitative	Leaders need pay to attention to how late career nurses are selected and matched to organisational projects
(Palmer 2014)	Qualitative and quantitative	Increasing nursing pay is one strategic to consider in decreasing turnover and increasing satisfaction
(Likupe 2015)	Qualitative	Managers need to be aware that good policies can be misinterpreted and disadvantage minorities and should therefore take steps to promote good

Author, year	Research design	Competency define
		practice
(Duffield et al. 2014)	Qualitative	Methods of job enrichment need to be considered as part of career development policy