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**ProInCa**

**Promoting the Innovation Capacity of Higher Education in Nursing during Health Services' Transition**

# D2.4.1
# Present health care leaders' leadership and management competencies, and structural system changes needed in nursing reform in Kazakhstan

**WP2.4 Modernization of nursing leadership**

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# Summary

This report describes the leadership and management competencies of sister and chief nurses and chief physicians in Kazakh health care facilities. Different research findings and leadership competency models emphasise different competency domains, but their also overlap each other. In this report leadership competency dimensions were summarized into six leadership competency domains: Setting direction, Managing services and driving results, Leading people and teams, Enhancing nursing professionalism and ethics, Communication and team collaboration skills, and Self-leadership. With the questionnaire based on these competency domains was sent to respondents electronically and in paper version and the respondents assessed their own leadership competencies. According to the results, all competency domains and different competency statements in the questionnaire seem to be relevant. In all competency domains, the managers seem to have quite good competency level. The nursing reform described in the Comprehensive Plan of Nursing Care Development in the Republic of Kazakhstan until 2020 was not familiar to almost half of the respondents and needs to be implemented more strongly in the near future.

# 1 Introduction

Health care in Kazakhstan is currently undergoing many changes. The aims of the nursing reform are defined in the Comprehensive Plan of Nursing Care Development in the Republic of Kazakhstan until 2020. As organizational change is a complex multi-dimensional task and the success of change is based on different activities of change leadership (Battilana et al. 2010), more and more attention has been focused on research on leadership development for a changing sector especially (e.g. Budhoo & Spurgeon 2012; Battilana et al. 2010). One starting point is that in organizational changes leadership should change as well (Viitala et al. 2017). Each organization determines what kind of leadership competencies it needs (Fernández-Aráoz, Roscoe & Aramaki 2017). In order to plan, implement and evaluate an effective way to develop leaders' competencies, it is important to assess the present leaders' competencies and roles. In this research report, leadership is seen as a key component in the nursing modernizing process and a requisite for the nursing reform described in the Comprehensive Plan of Nursing Care Development in the Republic of Kazakhstan. Like Viitala et al. (2017) state, there is a need

to strengthen the role of leadership and its development as a strategic asset and an overarching organizational-level issue.

The focus of this paper is on health care leadership and management competencies. These competencies are important both in nursing and medicine, and there needs to be a holistic approach in health care (Pihlainen et al. 2016).The aim of this report is to define and describe the nursing leadership and management competencies and the role of nursing leaders in nursing reform of health care facilities in Kazakhstan. Although there are research findings worldwide on leadership and management competencies, and several health care leadership competency frameworks, the context is always important. One reason for leadership practices to vary across countries is national culture, although the way leaders behave makes a difference, regardless of country and culture (Posner 2013). This research report is part of the ProInCa –project, which aims to support the development of nursing profession and nursing leadership in Kazakhstan.

# 2 Health care leadership competencies

In this report, leadership and management are seen as parallel processes, and the concept leadership consists of both leadership and management. Kallas (2014) defines leadership competencies as skills and behaviours that contribute to excellent performance. The AONE The Nurse Manager Competencies define competencies as skills, knowledge and abilities that guide the practice of nurse leaders. According to Pihlainen et al. (2016), in health care the management and leadership competencies of nursing and physician managers' are similar, but there is need for a common and non-professional framework for learning leadership and management competency. This approach enables a shared understanding of management and leadership throughout health care. Thach and Thompson (2007) state that most of the leadership competencies required for effective leadership are often seen as universal in the for-profit and public/non-profit sector. However, public organization leadership requires explicit goals; it is governed by specific regulations and is reliant on taxes.

Researchers and different health care management associations and organizations have already developed different health care and nursing leadership competency frameworks and models in order to

assess, develop, and train leaders. However, their focus and competency domains vary. The health care leadership competencies have been presented with a traditional trait-approach (Viitala et al. 2017), with different competency domains and categories (Pihlainen et al. 2016; Aitken & von Treuer 2014; Czabanowska et al. 2013; Gtandy & Holton 2013; Gentry & Sparks 2012), and with different leadership activities and roles (Bender 2016).

Viitala et al. (2017) state in their research that leaders need to be goal oriented, and at the same time, they need participative and communicative skills. Coaching leadership is important because of the need for learning and renewal arising because of continual changes within organizations. (Viitala et al, 2017.) Gentry and Sparks (2012) research findings show that resourcefulness, change management, and building and mending relationships are universally important leadership competencies for organizational success. Pihlainen et al. (2016) state based on their study that three main categories of health care leadership and management competency are health care context-related, operational and general competency. Also Kantanen et al. (2015) developed and piloted an instrument for measuring nurse managers' leadership and management competencies. In their study, the instrument consisted of two main areas, general competency and specific competency. According to the researchers, general competency areas are essential on all levels of nursing management. The second, specific competency emphasizes strong profession-specific knowledge.

Further, Grimm et al. (2015) conducted a qualitative analysis of five current leadership models (Transformational Leadership, Servant Leadership, Emotional Intelligence, Collaborative Leadership, and Appreciative Leadership) and the NLN Public Health Leadership Competencies. They identified six competency domains: community/organizational responsiveness, the ability to inspire, results focused, social intellect, authenticity, and composure and balance. The researchers state that the result gives insight to the skills most important for leadership, and could provide a foundation for future leadership development. According to Bender (2016), a clinical nurse leader needs an approach of continuous clinical leadership, which comprises four fundamental activities: facilitating effective ongoing communication, strengthening intra and inter professional relationships, building and sustaining teams, and supporting staff engagement. This kind of nurse-led model of care for promoting intra and inter professional communication, collaboration and practice can improve health care quality. Further Day et

al. (2014) created a conceptual model of five domains of nursing leadership, where nurse leaders are in contact and move between the individual, group, and governance levels. The five domains of leadership competency are vision (including strategic orientation and strategic thinking), knowledge, interpersonal effectiveness, personal mastery, and systems thinking. The competencies in one domain often overlap with or relate to those in another. The researchers state that is challenging to operationalize the competencies.

Czabanowska et al. (2013) developed a public health leadership competency framework consisting of eight domains: Systems Thinking, Political Leadership, Collaborative Leadership: Building and Leading Interdisciplinary Teams, Leadership and Communication, Leading Change, Emotional Intelligence and Leadership in Teambased Organizations, Leadership, Organizational Learning and Development, and Ethics and Professionalism. Aitken and von Treuer (2014) focus in their study on leadership competency framework for successful service integration. Their framework consists of five competency domains: Leadership and governance in service integration, Relationship management and communication skills, Management of people, organisational systems and processes, Practice knowledge, and Personal characteristics and capabilities. An important, even vital area of leadership in health care and in nursing, is to support evidence based practice (EBP), as nursing leaders play an instrumental role the process of implementing EBP (Pryse, McDaniel &Schafer 2014; Sandström et al. 2011).

Beside different study findings, there are several models defining and assessing nursing and health care leadership competencies, but also their competency domains vary. The Healthcare Leadership Alliance (HLA) has created the HLA Competency Directory, which can be used to ensure that current and future healthcare leaders have the training and expertise they need to meet the challenges of managing the nation's healthcare organizations. The competencies consist of five domains: Communication and Relationship Management, Leadership, Professionalism, Knowledge of the Healthcare Environment, and Business Skills and Knowledge. Stefl and Bontempo (2008) advice, that the HLA model can be used for individual and organizational assessment, employee selection, team development, and for leadership education and training purposes. Although with the health care industry changing rapidly, health care leadership competencies require continual updating and validation. (Stefl & Bontempo 2008.) Many associations and organisations have leadership competency models, which have derived the competency

domains from the HLA Competency Directory (ACHE, American College of Healthcare Executives; AONE, American Organization of Nurse Executives; IHF, International Hospital Federation). The AONE has also a different competency model and domains for nurse managers. The model emphasizes a nurse manager's responsibility for creating safe, healthy and professional environments that support the work of the interdisciplinary health care team and contribute to optimal patient outcomes. The successful nurse leader must gain expertise in three domains, which are the science: managing the business, the art: leading the people and the leader within: creating the leader in yourself. All three domain consists of sub domains.

The NHS Leadership Academy (2013) presents the Healthcare Leadership Model, which consists of nine leadership dimensions: inspiring shared purpose, leading with care, evaluating information, connecting our service, sharing the vision, engaging the team, holding to account, developing capability, and influencing for results. The NHS Leadership Academy (2011) has created another leadership competency model called Clinical Leadership Competency framework. The academy built the model on the concept of shared leadership. The model emphasizes a shared sense of responsibility for the successful delivery of the services. Acts of leadership can come from anyone in the organisation focusing on the achievement of the group rather than of an individual. The frameworks consists of five domains: demonstrating personal qualities, working with others, managing services, improving services and setting direction. The LEADS in a Caring Environment Framework (Canadian College for healthcare leaders) was developed in 2006. The LEADS framework consists of five domains: Lead self (L), Engage others (E), Achieve Results (A), Develop Coalitions (D), and Systems Transformation (S). The Oncology Nursing Society Leadership Competencies have been divided into five domains, which are personal mastery, vision, knowledge, interpersonal effectiveness, and systems thinking. (Appendix 2.)

As a conclusion, it can be seen that different research findings and health care leadership competency models emphasize different kind of leadership competency domains, but overlap each other in many areas. In this report, health care leadership competencies are categorized under six domains: setting direction, managing services and driving results, leading people and teams, enhancing nursing professionalism and ethics, communication and team collaboration skills, and self-leadership.

Self-assessment of leadership competency

One way to assess leadership competencies is self-assessment, which should not be used as identification for 'better' or 'worse' managers like Kantanen et al. (2017) mention in their research. The researcher further state, that a self-assessment tool can be used from an organisational perspective to better understand and develop leadership and management competencies (Kantanen et al. 2017). A competency model can provide a common framework for self-assessment, a guideline that fosters development and enhances growth. A common competency model facilitates linking development activities to goals and objectives, and can be used as a communication tool to inform of needed leadership development strategies. (Day et al. 2014.) Based on previous research leaders may see their leadership skills better than their employees may: they rate their active participation in employee development higher than employees (Skela Savič & Robida 2013).

# 3 Purpose and aims of the research

The purpose of this study is to describe health leadership competencies in health care facilities in Kazakhstan. The domains of leadership competencies are based on literature review and on different nursing and health care leadership competency assessment models.
The aims of the research are

To describe health leadership competencies in health care facilities in Kazakhstan.
To describe the role and managerial structure needed for the nursing reform in Kazakhstan.

# 4 Data collection

The study was carried out in two phases. In the first phase, an integrative literature review (Coughlan, Cronin & Ryan 2013) was conducted to identify different nursing and health care leadership competencies and competency frameworks. The first step of an integrative review is to identify the concept of interest (Coughlan et al. 2013, 17), and as the survey was to cover nurse and physician leaders, the concept was identified as health care leadership competency. A literature search was conducted using

the search terms leadership and/or management competency, leadership competency framework, nursing leadership competency, and health care leadership competency. Articles were selected based on research findings especially from nursing and health care. For papers to be included, they had to have been published in scientific peer-reviewed journals and the full text was available. As integrative review draws material from diverse sources like empirical and theoretical literature, the research approach was not an exclusion strategy. In addition, different leadership competency models and frameworks were included as many of them where created based on research findings. After reading the articles with relevant titles, abstracts, and results, and summarizing different health and nursing leadership competency models, the different leadership competency domains were compiled into the table and further thematically analysed and summarized into a health care leadership competency framework and a questionnaire (Appendix 1; Appendix 2.).

The questionnaire consisted of six leadership competency domains (Setting direction; Managing services and driving results; Leading people and teams; Enhancing nursing professionalism and ethics; Communication and team collaboration skills; Self-leadership). The domains included altogether 85 statements/items. The respondents were asked to rate each item on a Likert-type scale (1. No competence; 2. Some competence, 3. Good competence; 4. Excellent competence, and 5. Not relevant to my present work). The questionnaire included open questions on managerial education and a question of the changes needed in the role and managerial structure of nursing in nursing reform in Kazakhstan. In addition, there was an open question on competencies, which were not included in the questionnaire, and which the respondents might wanted to add. The questionnaire was translated into Russian and Kazakh by a Kazakh university.

The data were collected in spring 2018. The questionnaire was sent in electronic or paper form to nursing and physician leaders in health care facilities. The inclusion criterion was that potential respondents held the role of senior nurse, chief nurse, chief physician or similar role in primary or specialised health care. The contact person in a Kazakhstan university sent the nurse leaders and chief physicians an email request to participate in the study. A letter was sent by email describing the study and its purpose, and included a public link to the electronic questionnaire (Webropol 2.0). In addition, paper version questionnaires were distributed, as some managers had not access to internet. The total number of those who received

the questionnaire is not known, because the electronic link was sent forward to each organization and each respondent.

Permission to conduct the research was obtained from all of health organisations who participated. All participants were informed about the study, including the project and research topic description, the voluntarily nature of participation, that all organizations and respondents stay anonymous, the contact details of the researcher, and that only the researcher would analyse the data. All questionnaires were filled out anonymously, the Webropol –electronic link was public, and the researcher asked no email addresses or other contact information. The responses could not be tracked back to the respondents or any organization. Answering the questionnaire was interpreted as the subject's informed consent to process the supplied data after reading the information of the research and the leadership competency self-assessment.

The leadership competency responses were not analysed based on different background groups like gender, work position or educational background. The data were analysed collectively in order describe the educational background of health care leaders and to assess the competency level in different leadership competency domains. The data were analysed by statistical methods using SPSS software. The data are described in terms of percentage and frequency divisions, means and standard deviations. Internal consistency for different competency domains were assessed using Cronbach's alpha.

# 5 Results

## 5.1 Health care leaders´ leadership competencies

Altogether 252 responded of which most were female (92.3 %). Over half of the respondents (58.8 %) worked as a senior nurse and 31.4 % as a chief physician and 3.4 % as a chief nurse (6.1 % had some other position). Senior nurse refers to a nursing manager on a unit or ward level, and chief nurse refers to a nurse manager at middle management level. Chief physicians have nurses as their subordinates. Off the respondents, 66.2 % had a vocational education, of which half had a speciality in nursing (52.2 %). Other educational background chosen was medical doctor (26.4 %), and 4 % had a PhD. Over 60 % of the respondents had the highest category. Most of the respondents (61.7 %) had not participated in

organizational management training in their own organization, but over one third of the respondents had had some managerial training. Most often mentioned areas were management and/or leadership skills (21 times), the role of senior nurse (17 times), mentoring (seven times), and organization of health care (five times). About 40% of the respondents had had managerial training during their professional education, but 54 % did not mention any managerial training. Fifteen respondents (6 %) had not had any management issues included in their professional education. The most mentioned management training the respondents had received during their professional training were management and/or leadership training (over 50 respondents), communication skills and resource management (both nine mentions), conflict management skills (seven mentions), and economics (four mentions). Other areas mentioned were team management, negotiation skills, stress management, psychology, and corporate governance. One fifth of the respondents (21 %) were familiar with the nursing reform in Kazakhstan (the Comprehensive Plan of Nursing Care Development in the Republic of Kazakhstan until 2020) and about one third (36 %) were familiar at least at some level. Over 42 % of respondents were not aware of the nursing reform at all. (Table 1.)

*Table 1. Demographic data (256)*

| | Frequency | Percentage (%) |
|---|---|---|
| **Gender** | | |
| Male | 18 | 7.2 |
| Female | 232 | 92.8 |
| **Present job position** | | |
| Senior nurse | 144 | 58.8 |
| Chief nurse | 9 | 3.7 |
| Chief physician | 77 | 31.4 |
| Other | 15 | 6. |
| **Work experience as a manager** | | |
| Less than 1 year | 27 | 10.9 |
| 1-5 years | 71 | 28.6 |
| 6-10 years | 44 | 17.7 |
| 11-15 years | 55 | 22.2 |
| 16-20 years | 13 | 5.2 |
| over 20 years | 38 | 15.3 |
| **Educational background** | | |
| Vocational education in nursing | 138 | 55.2 |
| Vocational education and training | 16 | 6.4 |
| Academic bachelor | 15 | 6 |
| Master's degree | 1 | 0.4 |
| Medical doctor | 66 | 26.4 |
| PhD | 10 | 4 |
| Other | 4 | 1.6 |
| **Familiar with the aims of the nursing reform** | | |

| | | |
|---|---|---|
| Yes | 51 | 21.4 |
| At some level | 86 | 36.1 |
| No | 101 | 42.4 |

The nursing leadership competency domains were assessed with four level scale: no competence (1), some competence (2), good competence (3), and excellent competence (4). In addition, there was a choice of not relevant in one's present work. According to the results, all competency domains and different competency statements seem to be relevant as in different domains or competency statements no or only a few respondents thought the domain or statements as not relevant. In all competency domains, the managers seem to have quite good competency level. In the first competency domain, setting direction the range of mean was 2.3-2.9. The lowest mean was in the statement of the competency for defining strategic priorities based on the nursing reform. In addition, identifying changes and emerging trends in health care environment, and defining vision and strategic priorities in collaboration with other managers/governing body were at lower level than other strategic competencies (mean was 2.4 and 2.5). The top rated competencies were leading employees and teams in change and especially changes needed in order to improve patient services. The respondents assessed competencies in change management to be at good level, and 74-79 % of the respondents thought that their competency level was good or excellent. In addition, quite high means were in the statements concerning the monitoring, assessing, applying and implementing the strategic priorities as a leader in one's own team and its work, and leading change (average mean 2.9). (Figure 1., Table 1.) The internal consistency for the domain setting direction was assessed using Cronbach's alpha in two sub domains, and it was between ,877-,907.

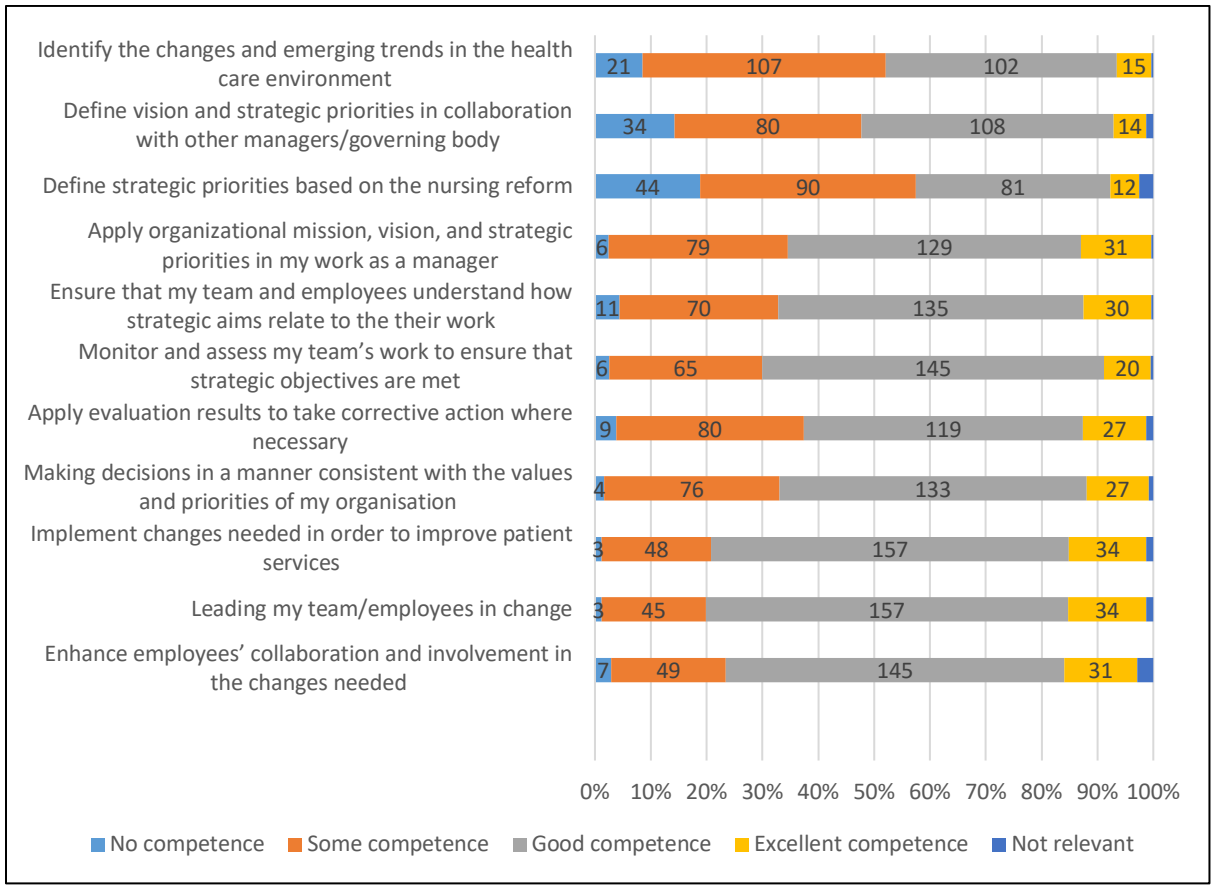


*Figure 1. Competency domain Setting direction*

*Table 2. Competency domain Setting direction*

| Statement | Mean | SD |
|---|---|---|
| Identify the changes and emerging trends in the health care environment | 2.45 | 0.74 |
| Define vision and strategic priorities in collaboration with other managers/governing body | 2.44 | 0.82 |
| Define strategic priorities based on the nursing reform | 2.27 | 0.83 |
| Apply organizational mission, vision, and strategic priorities in my work as a manager | 2.76 | 0.70 |
| Ensure that my team and employees understand how strategic aims relate to the their work | 2.747 | 0.72 |
| Monitor and assess my team's work to ensure that strategic objectives are met | 2.76 | 0.64 |
| Apply evaluation results to take corrective action where necessary | 2.70 | 0.72 |

| | | |
|---|---|---|
| Making decisions in a manner consistent with the values and priorities of my organisation | 2.76 | 0.66 |
| Implement changes needed in order to improve patient services | 2.92 | 0.62 |
| Leading my team/employees in change | 2.90 | 0.61 |
| Enhance employees' collaboration and involvement in the changes needed | 2.86 | 0.67 |

In the second competency domain, managing services and driving results, the range of mean was 2.5-2.9. The lowest means (2.5) were in the competency statements about the funding system of the healthcare services, and the impact and consequences of financial decision making on service operations. The budgeting of one's own area of responsibility got a little higher mean (2.7.) Otherwise, the means were between 2.7 and 2.9. The respondents assessed competencies on quality assurance and preventing risk to be at good level, and 68-77% of the respondents thought that their competency level was good or excellent. (Figure 2., Table 3.) The internal consistency for the domain Managing services and driving results was assessed using Cronbach's alpha in three sub domains, and it was between ,843-,917.

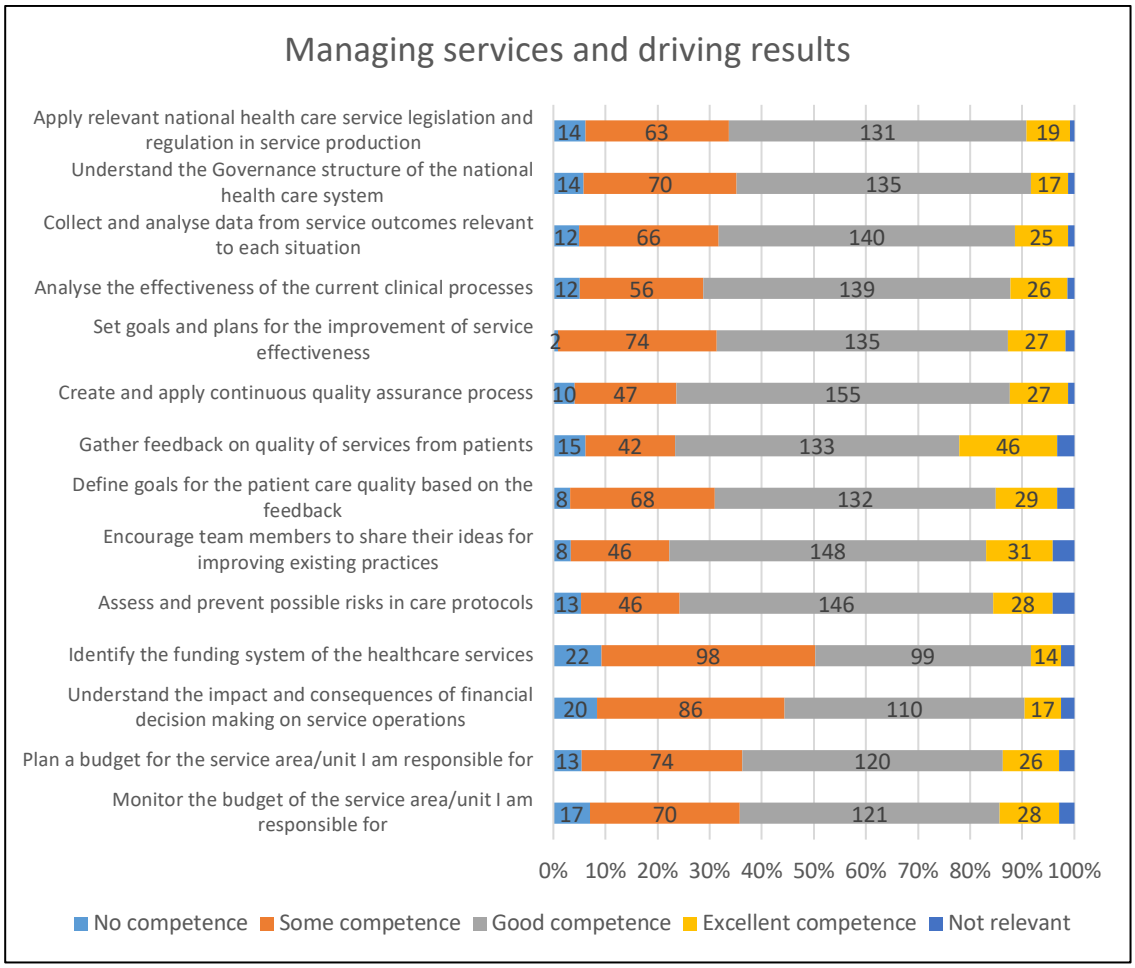


*Figure 2. Competency domain Managing services and driving results*

*Table 3. Competency domain Managing services and driving results*

| Statement | Mean | SD |
|---|---|---|
| Apply relevant national health care service legislation and regulation in service production | 2.68 | 0.71 |
| Understand the governance structure of the national health care system | 2.66 | 0.70 |
| Collect and analyse data from service outcomes relevant to each situation | 2.71 | 0.71 |
| Analyse the effectiveness of the current clinical processes | 2.77 | 0.71 |
| Set goals and plans for the improvement of service effectiveness | 2.79 | 0.64 |
| Create and apply continuous quality assurance process | 2.83 | 0.67 |
| Gather feedback on quality of services from patients | 2.89 | 0.79 |
| Define goals for the patient care quality based on the feedback | 2.78 | 0.72 |
| Encourage team members to share their ideas for improving existing practices | 2.89 | 0.70 |

| | | |
|---|---|---|
| Assess and prevent possible risks in care protocols | 2.81 | 0.71 |
| Identify the funding system of the healthcare services | 2.46 | 0.76 |
| Understand the impact and consequences of financial decision making on service operations | 2.53 | 0.75 |
| Plan a budget for the service area/unit I am responsible for | 2.68 | 0.74 |
| Monitor the budget of the service area/unit I am responsible for | 2.68 | 0.78 |

The competency domain leading people and teams had the highest means compared to other competency domains, and most of the means varied between 2.8 and 3.0. Applying human resource laws and regulations, and competency development by implementing training programs was seen the most challenging area (mean 2.6). The respondents assessed to have had good competencies in valuing, respecting and promoting employee equality and diversity, and 78 % thought that they have good or excellent competency. In addition, assessing the competency, performance, and educational needs of the employees and leading teams and individuals with a goal-oriented approach got quite a high mean (2.9). (Figure 2., Table 3.) The internal consistency for the domain Leading people and teams was assessed using Cronbach's alpha in three sub domains, and it was between ,710-,946.

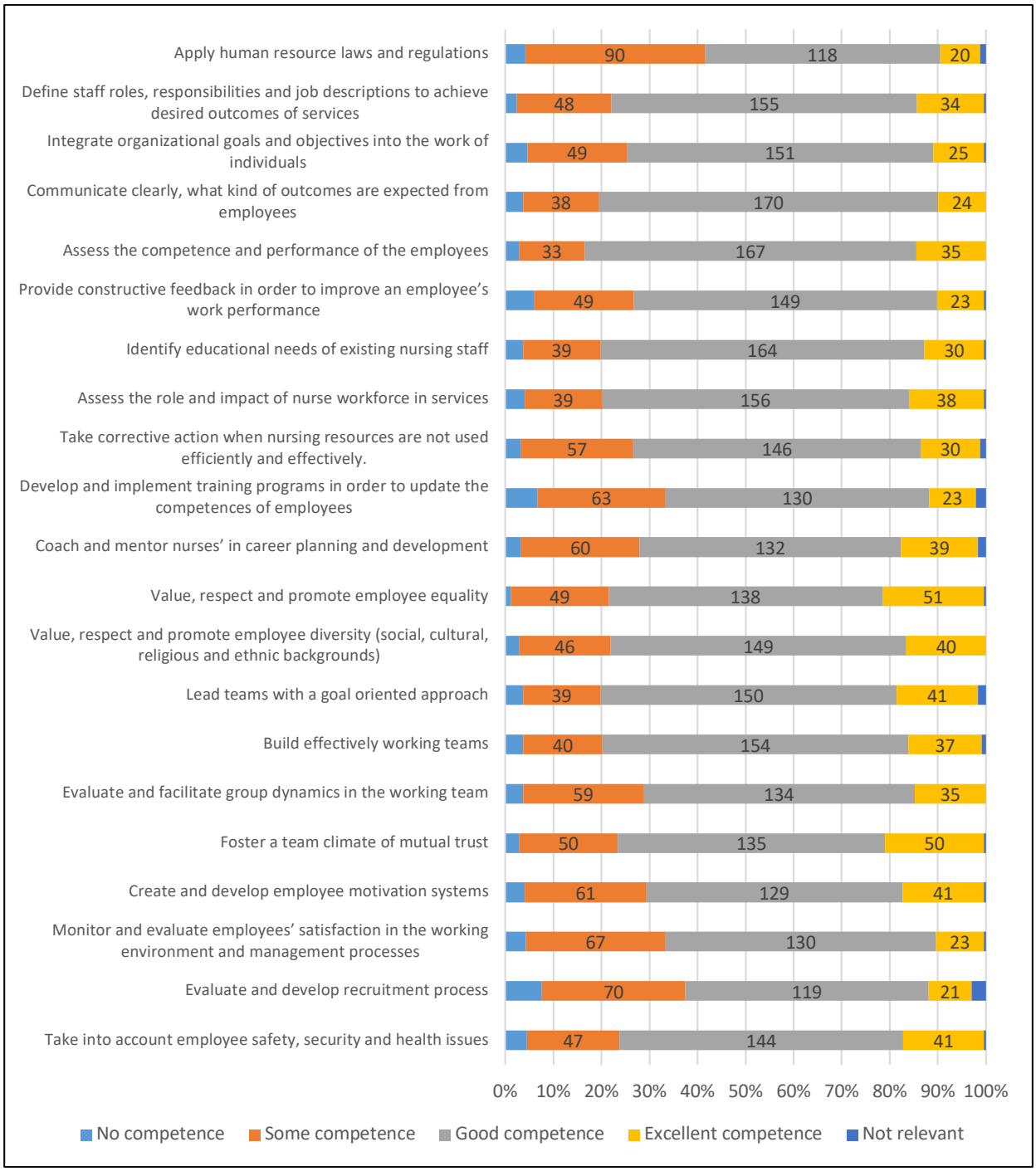


*Figure 3. Competency domain Leading people and teams*

*Table 4. Competency domain Leading people and teams*

| Statement | Mean | SD |
|---|---|---|
| Apply human resource laws and regulations | 2.62 | 0.70 |
| Define staff roles, responsibilities and job descriptions to achieve desired outcomes of services | 2.89 | 0.65 |
| Integrate organizational goals and objectives into the work of individuals | 2.81 | 0.69 |
| Communicate clearly, what kind of outcomes are expected from employees | 2.87 | 0.63 |
| Assess the competence and performance of the employees | 2.95 | 0.63 |
| Provide constructive feedback in order to improve an employee's work performance | 2.77 | 0.70 |
| Identify educational needs of existing nursing staff | 2.89 | 0.65 |
| Assess the role and impact of nurse workforce in services | 2.91 | 0.69 |
| Take corrective action when nursing resources are not used efficiently and effectively. | 2.82 | 0.68 |
| Develop and implement training programs in order to update the competencies of employees. | 2.69 | 0.74 |
| Coach and mentor nurses' in career planning and development. | 2.85 | 0.73 |
| Value, respect and promote employee equality. | 3.0 | 0.69 |
| Value, respect and promote employee diversity (social, cultural, religious and ethnic backgrounds. | 2.92 | 0.68 |
| Lead teams with a goal oriented approach | 2.93 | 0.69 |
| Build effectively working teams | 2.91 | 0.68 |
| Evaluate and facilitate group dynamics in the working team | 2.82 | 0.72 |
| Foster a team climate of mutual trust | 2.95 | 0.74 |
| Create and develop employee motivation systems | 2.83 | 0.75 |
| Monitor and evaluate employees' satisfaction in the working environment and management processes | 2.72 | 0.70 |
| Evaluate and develop recruitment process | 2.63 | 0.76 |
| Take into account employee safety, security and health issues | 2.88 | 0.73 |

In the competency domain, Enhancing nursing professionalism and ethics all statements had quite a high mean (2.7-3.2) except the competency statement of the ability to apply the nursing reform in service development (2.5). In all items over half of the respondents has good or excellent level competency. The ability to identify and take appropriate action if ethics and values are compromised in patient care got the highest mean (3.3) compared to all competency domains and statements. Also other statements on patient care ethics and safety got good competency level mean (3.0-3.1). (Figure 4., Table 5.) The internal

consistency for the domain Enhancing nursing professionalism and ethics was assessed using Cronbach's alpha in two sub domains, and it was between , 924-,946.

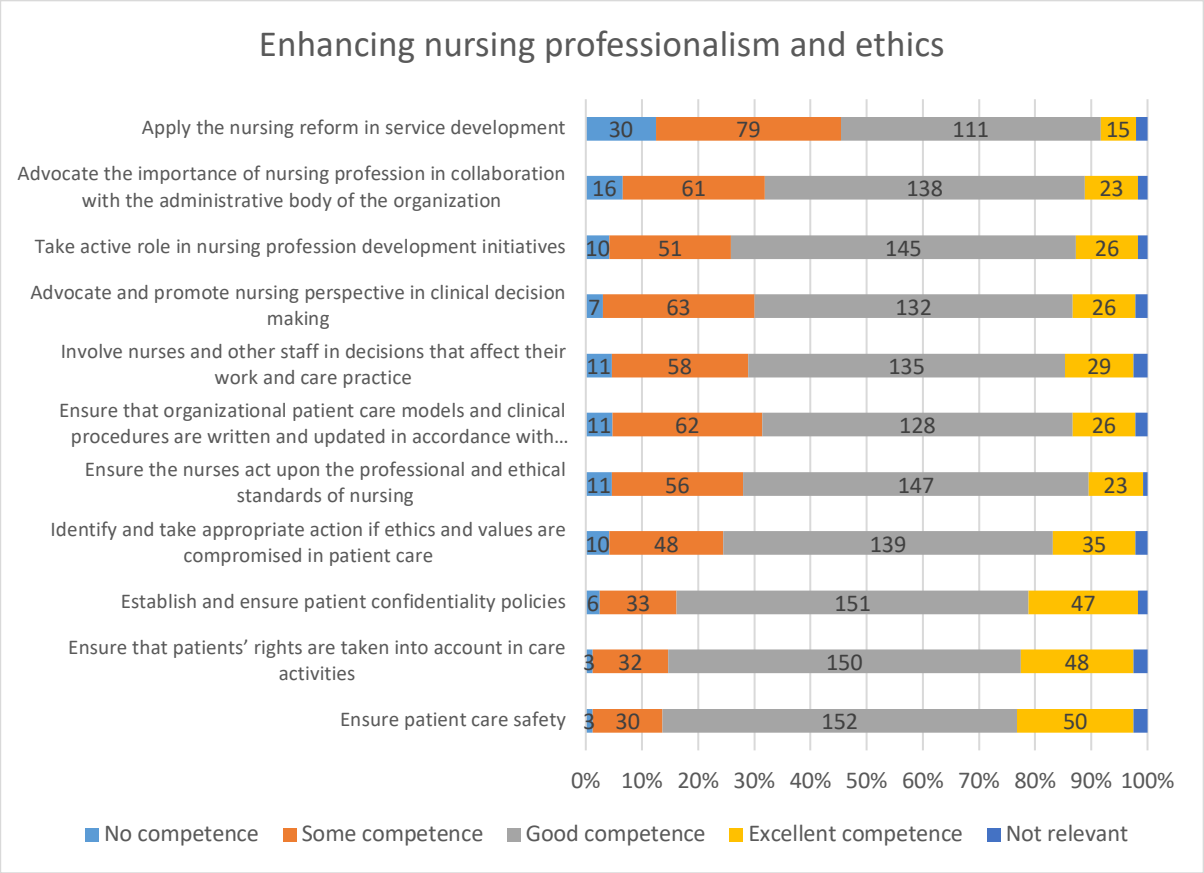


*Figure 4. Competency domain Enhancing nursing professionalism and ethics*

*Table 5. Competency domain Enhancing nursing professionalism and ethics*

| Statement | Mean | |
|---|---|---|
| Apply the nursing reform in service development | 2.48 | 0.81 |
| Advocate the importance of nursing profession in collaboration with the administrative body of the organization | 2.72 | 0.75 |
| Take active role in nursing profession development initiatives | 2.82 | 0.70 |
| Advocate and promote nursing perspective in clinical decision making | 2.78 | 0.68 |
| Involve nurses and other staff in decisions that affect their work and care practice | 2.78 | 0.72 |

| | | |
|---|---|---|
| Ensure that organizational patient care models and clinical procedures are written and updated in accordance with evidence-based nursing practice | 2.74 | 0.72 |
| Ensure the nurses act upon the professional and ethical standards of nursing | 2.77 | 0.68 |
| Identify and take appropriate action if ethics and values are compromised in patient care | 2.85 | 0.72 |
| Establish and ensure patient confidentiality policies | 3.02 | 0.67 |
| Ensure that patients' rights are taken into account in care activities | 3.04 | 0.63 |
| Ensure patient care safety | 3.1 | 0.62 |

The respondents assessed their competency level in the competency domain Communication and team collaboration skills to be at good level. The means varied between 2.8-3.1. In all statements, 70% -90% had good or excellent competency. The internal consistency for the domain Communication and team collaboration skills was assessed using Cronbach's alpha, which was , 924.

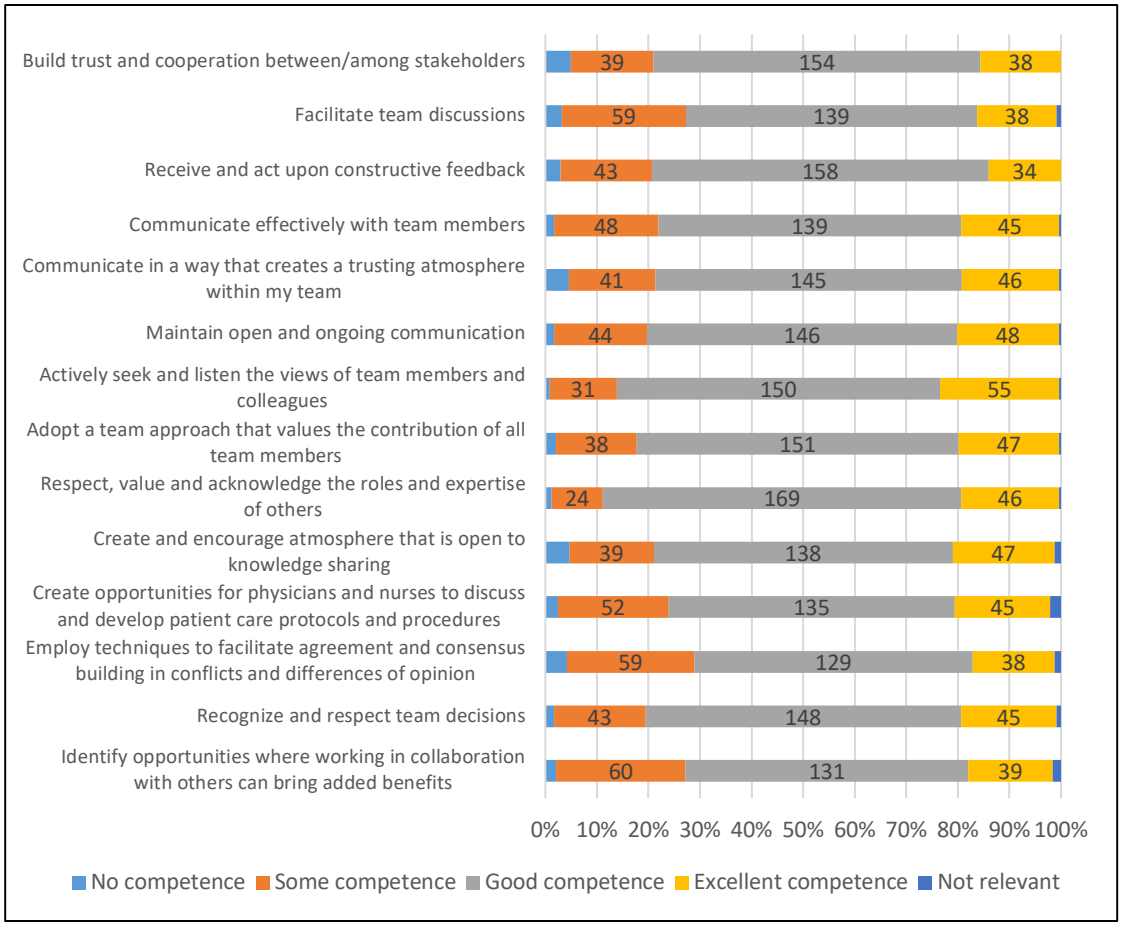

*Figure 5. Competency domain Communication and collaboration skills*

*Table 6. Competency domain Communication and collaboration skills*

| Statement | Mean | |
|---|---|---|
| Build trust and cooperation between/among stakeholders | 2.90 | 0.71 |
| Facilitate team discussions | 2.85 | 0.71 |
| Receive and act upon constructive feedback | 2.90 | 0.65 |
| Communicate effectively with team members | 2.95 | 0.68 |
| Communicate in a way that creates a trusting atmosphere within my team | 2.93 | 0.73 |
| Maintain open and ongoing communication | 2.98 | 0.67 |
| Actively seek and listen the views of team members and colleagues | 3.08 | 0.62 |
| Adopt a team approach that values the contribution of all team members | 3.00 | 0.66 |
| Respect, value and acknowledge the roles and expertise of others | 3.01 | 0.58 |
| Create and encourage atmosphere that is open to knowledge sharing | 2.94 | 0.74 |
| Create opportunities for physicians and nurses to discuss and develop patient care protocols and procedures | 2.92 | 0.71 |
| Employ techniques to facilitate agreement and consensus building in conflicts and differences of opinion | 2.83 | 0.74 |
| Recognize and respect team decisions | 2.98 | 0.66 |
| Identify opportunities where working in collaboration with others can bring added benefits | 2.87 | 0.70 |

Also in self-leadership competency domain, the respondents seem to have good skills, and the mean varied between 2.8-3.1. In almost all competency statements, 70-80% of the respondents had good or excellent skills. (Figure 6.,Table 7.) The internal consistency for the domain Self-leadership was assessed using Cronbach's alpha, which was ,924.

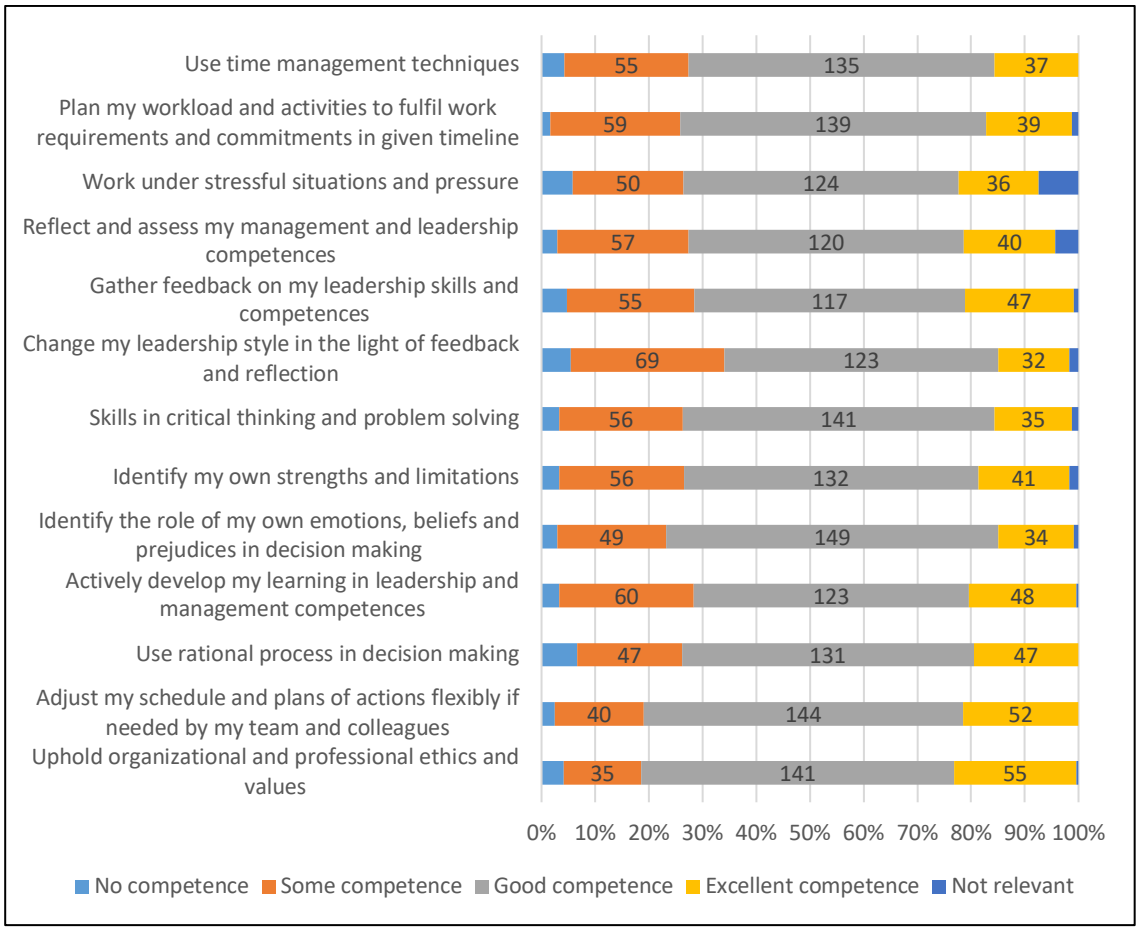


*Figure 6. Competency domain Self-leadership*

*Table 7. Competency domain Self-leadership*

| Statement | Mean | SD |
|---|---|---|
| Use time management techniques | 2.84 | 0.73 |
| Plan my workload and activities to fulfil work requirements and commitments in given timeline | 2.88 | 0.68 |
| Work under stressful situations and pressure | 2.81 | 078 |
| Reflect and assess my management and leadership competencies | 2.86 | 0.74 |
| Gather feedback on my leadership skills and competencies | 2.87 | 0.79 |
| Change my leadership style in the light of feedback and reflection | 2.73 | 0.76 |
| Skills in critical thinking and problem solving | 2.85 | 0.70 |
| Identify my own strengths and limitations | 2.87 | 0.73 |

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| Identify the role of my own emotions, beliefs and prejudices in decision making | 2.88 | 0.67 |
| Actively develop my learning in leadership and management competencies | 2.88 | 0.76 |
| Use rational process in decision making | 2.87 | 0.80 |
| Adjust my schedule and plans of actions flexibly if needed by my team and colleagues | 3 | 0.69 |
| Uphold organizational and professional ethics and values | 3.0 | 0.75 |

## 5.2 Structural changes needed in nursing education and profession

The questionnaire contained an open question on the changes needed in the role and managerial structure of nursing management. The respondents suggested different structural and other changes and development areas to enhance nursing reform in Kazakhstan. In the data, there emerged six thematic areas: nursing education and competency development, nursing autonomy, nurse and doctor partnership, international and national benchmarking and cooperation, patient self-care development and changes in payment system. According to the results, the nursing reform requires also reform in nursing education at all educational levels. Many respondents suggested that the educational degree in nursing required should be a higher education degree (bachelor level). The respondents suggested that with higher education there would emerge a new generation of nurses who are able to enhance nursing profession and nursing process in health care. In developing nursing education at higher education level, international cooperation was seen important. In addition, in order to support the new role of nurses, also nursing leadership and management education should be strengthened at universities. Based on the comments, there is a need for nursing leadership discipline to be established. Some of the respondents also emphasized medical education and suggested that medical education should be deepened (interpretation of laboratory tests, pharmaceutical issues, examining a patient). Overall nursing competency development was seen an essential area in the implementation of the nursing reform.

The respondents stated that defining and developing autonomy of nursing profession is based on identifying the areas of nursing responsibility. Nurses need to define the nursing process as an independent process and specialization. Nursing needs to be seen as one profession and separate from medical care. Especially in health promotion and working as paramedics, nurses have their independent role. Nursing professionals could be seen as the main force in health promotion. Nurses need empowerment from the society, doctors and themselves. Beside the nursing autonomy, the respondents emphasized nurse and doctor partnership, and suggested that nurses should be more involved in clinical

decision-making. Some respondents mentioned, the patients might have health problems that can be as significant or even more significant as the problem arising from the initial medical problem. The respondents suggested that some responsibilities of doctors could be delegated to nurses. International cooperation and benchmarking is according to the respondents a good way to enhance nursing profession and nursing leadership in Kazakhstan. Different models and clinical processes between Kazakhstan and different European countries and for example Japan and the USA, could be could compared. In addition, nursing reform would benefit from international mentors. National cooperation and benchmarking was also mentioned. According to the results, one area to develop was nurses' payment, which was seen as a parallel process of nursing profession enhancement. Better payment could to raise the profile of nursing profession.

# 6 DISCUSSION

The aims of this study was to explore nursing leadership and management competencies of nursing leaders in Kazakh health care facilities. The choice of both leadership competencies and competency assessment questionnaire used in this study was based on literature review and existing models on health care and nursing leadership competency. In addition, the nursing reform was an important framework for the leadership competency assessment. The respondents assessed their own competencies, which can help leaders to reflect and consider their own competency level. Although, like Kantanen et al. (2017) mention, the assessment was not meant to identify good or poor leadership skills. The aim was to give the respondents and different health care organisations a perspective to understand and develop the needed nursing leadership competencies for the benefit of nursing profession and the nursing reform in Kazakhstan.

Self-assessment is a context-specific tool. National and organizational culture may have an effect on the use of the competency scale. The respondents may assess their competency better than they actually are, if it is not socially acceptable to talk about own weaknesses or lack of competencies. On the other hand, a respondent may reflect one's own competencies too critically (Kantanen et al. 2017). In this study, the respondents saw the different competency domains and statements relevant, and assessed their leadership competencies quite good. Still, the results must be critically reflected as the nursing profession, nursing

education and nursing leadership in Kazakhstan are seen as areas to develop. Skela Savič & Robida (2013) found at based on previous research, that leaders might rate their leadership skills better than their employees.

According to the results, nursing is not seen as an autonomous profession. The educational background is mostly at vocational level except with chief physicians. These study findings need to be considered in their national and social context. It seems that there is a need for more research on the present and future leadership competencies needed in the nursing reform in Kazakhstan. There is a need to openly discuss the leadership and managerial competencies of nursing leaders based on nursing profession and its important role in health promotion and in health care facilities.

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## Appendix 1. Research findings in leadership competency models

| Researcher/s | Research aim and method | Main domains | |
|---|---|---|---|
| Pihlainen et al. 2016 | To describe the characteristics of management and leadership competence of health-care leaders and managers (nursing and physician managers), especially in the hospital environment.<br><br>A systematic literature review. | Health care context-related management and leadership competence | Social competence<br>Organizational competence<br>business competence<br>Financial competence |
| | | Operational management and leadership competence | Process competence<br>Operation competence<br>Clinical competence<br>Development competence |
| | | General management and leadership competence | Time management competence<br>Interpersonal skills<br>Strategic mindset<br>Thinking and application skills<br>Human resource management |
| Bender 2016 | Interpretive synthesis design and grounded theory analysis to develop a theoretical understanding of clinical nurse leader practice that can facilitate systematic and replicable implementation across health-care settings. | Facilitating effective ongoing communication | |
| | | Strengthening intra and interprofessional relationships | |
| | | Building and sustaining teams | |
| | | Supporting staff engagement | |
| Grimm et al. 2015 | To discern and develop a list of identified skills necessary to lead.<br><br>A manual qualitative analysis of the skills, domains, definitions, and traits included in five leadership models/theories (Transformational, Servant, Appreciative, Collaborative, and Emotional Intelligence leadership) and the NLN Leadership for Community Health, Safety & Resilience Competency Framework. | Organizational responsiveness: the ability to be keenly aware of the community and system around you. | Skill to serve the community<br>Skill to connect individual work/actions and the impact on the larger organization, community, and/or system<br>Skill to make decisions for the improvement of the larger organization, community, and/or system. |
| | | The Ability to Inspire: the ability to relate to others in a way that brings out the best in them. | Skill to collaborate and promote team work<br>Skill to build warm caring relationships<br>Skill to mentor and develop others |
| | | Results Focused: the ability to focus on outcomes and achievement of results. | Skill to communicate purpose and vision leading to results<br>Skill to be decisive in decision making<br>Skill to offer clear direction<br>Skill to think strategically and communicate the strategy to others |

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| | | Social Intellect: the ability to listen and engage with others. | Skill to effectively engage in conflict and controversy<br>Skill to manage personal feelings<br>Skill to actively listen to others' concerns and deal with their feelings<br>Skill to share power and influence with others. |
| | | Authenticity: the ability to be true to one's own personality, spirit, character, and ethics. | Skill to lead with honesty,<br>integrity, and trustworthiness<br>Skill and willingness to stand for individual beliefs<br>Skill to deal with and discuss difficult problems and situations. |
| | | Composure and Balance: the ability to use a level of selflessness and remain composed and balanced while in the centre of high pressure situations. | Skill to balance the stresses of work and life in a healthy way<br>Skill to be humble<br>Skill to remain composed and calm in the<br>heart of conflict and change<br>Skill to make time for continued learning and development |
| Kantanen et al. 2015<br><br>. | To describe the development and piloting of an instrument for measuring nurse managers' leadership and management competencies. | General competence | Promotion of Evidence-based Decision Making<br>Building and Maintaining Relationships<br>Communication and Influencing Skills<br>Service Initiation and Innovation<br>Resilience and Composure<br>Integrity and Ethical Stance<br>Sustained Personal Commitment<br>Professional Competence and Credibility |
| | | Specific competence | Substance Knowledge<br>HR Management<br>Operational Management<br>Research and Development Competence |
| Day et. al. 2014 | Literature review, data synthesis, and peer and expert review | Vision (including strategic orientation and strategic thinking) | |
| | | Knowledge | |
| | | Interpersonal effectiveness | |
| | | Personal mastery | |
| | | Systems thinking | |
| Aitken & von Treuer 2014 | To describe the organisational and leadership competencies required for successful service integration within a health consortia in Australia. | Leadership and governance in service integration | Organisation management<br>Clarity of shared vision.<br>Fostering organisational readiness<br>Leadership |
| | | Relationship management and communication skills | Collaborating with partners<br>Communication |

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| | | | Multi-disciplinary teamwork |
| | | Management of people, organisational systems and processes | Management of people<br>Management of organisational systems and processes<br>Planning, evaluation and service improvement |
| | | Practice knowledge | Program and practice knowledge<br>[Client group] advocacy and community development |
| | | Personal characteristics and capabilities | Personal integrity, achievement focus and self-management |
| Czabanowsk et al. 2013 | To develop a public health leadership competency framework to support the development of competency-based European public health leadership curriculum | Systems Thinking | |
| | | Political Leadership | |
| | | Collaborative Leadership: Building and Leading Interdisciplinary Teams | |
| | | Leadership and Communication | |
| | | Leading Change | |
| | | Emotional Intelligence and Leadership in Teambased Organizations | |
| | | Leadership, Organizational Learning and Development | |
| | | Ethics and Professionalism | |

## Appendix 2. Leadership and management competency models

| Institution and name of the competence model | Domains/dimensions of work | Sub dimensions |
|---|---|---|
| The Healthcare Leadership Alliance (HLA) | Communication and Relationship Management | Relationship Management<br>Communication Skills<br>Facilitation and Negotiation |
| | Leadership | Leadership Skills and Behavior<br>Organizational Climate and Culture<br>Communicating Vision<br>Managing Change |
| | Professionalism | Personal and Professional Accountability<br>Professional Development and Lifelong Learning<br>Contributions to the Community and Profession |
| | Knowledge of the Healthcare Environment | Health Care Systems and Organizations<br>Health Care Personnel<br>The Patient's Perspective<br>The Community and the Environment |
| | Business Skills and Knowledge | General Management<br>Financial management<br>Human resource management<br>Organizational dynamics and governance<br>Strategic planning and marketing<br>Information management<br>Risk management<br>Quality improvement |
| American college of healthcare Executives ACHE healthcare executive 2017 Competencies Assessment Tool | the same as HLA | the same as HLA |
| The Clinical Leadership Competency Framework 2011<br>NHS Leadership Academy. | Demonstrating Personal Qualities | Developing self-awareness<br>Managing yourself<br>Continuing personal development<br>Acting with integrity |
| | Working with Others | Developing networks<br>Building and maintaining relationships<br>Encouraging contribution<br>Working within teams |

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| | Managing Services | Planning<br>Managing resources<br>Managing people<br>Managing performance |
| | Improving Services | Ensuring patient safety<br>Critically evaluating<br>Encouraging improvement and innovation<br>Facilitating transformation |
| | Setting Direction | Identifying the contexts for change<br>Applying knowledge and evidence<br>Making decisions<br>Evaluating impact |
| American Organization of Nurse Executives. (2015). AONE Nurse Executive Competencies (derived from HLA) | Communication and Relationship Building | Effective Communication<br>Relationship Management<br>Influencing Behaviours<br>Diversity<br>Shared Decision-Making<br>Community Involvement<br>Medical/Staff relations<br>Academic Relationships |
| | Knowledge of the Healthcare Environment | Clinical Practice Knowledge<br>Delivery Models/Work Design<br>Health Care Economics<br>Health Care Policy<br>Governance<br>Evidence-based Practice/ Outcome Measurement<br>Patient Safety<br>Utilization/Case Management<br>Quality improvement/Metrics<br>Risk Management |
| | Leadership | Foundational Thinking Skills<br>Personal Journey Disciplines<br>Systems Thinking<br>Succession Planning<br>Change Management |
| | Professionalism | Personal and Professional Accountability<br>Career planning<br>Ethics<br>Evidence-based Clinical and Management Practice<br>Advocacy |

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| | | Active Membership in Professional Organizations |
| | Business Skills | Financial management<br>Human resource management<br>Strategic Management<br>Marketing<br>Information management and technology<br>Business Research |
| American Organization of Nurse Executives<br>Nurse Manager Competencies | The Science:<br>managing the business | Financial Management<br>Human Resource Management<br>Performance Improvement<br>Foundational Thinking Skills<br>Technology<br>Strategic Management<br>Appropriate Clinical Practice Knowledge |
| | The art: leading the people | Human Resource Leadership Skills<br>Relationship Management and Influencing Behaviours<br>Diversity<br>Shared Decision Making |
| | The leader within: creating the leader in yourself | Personal and Professional Accountability<br>Career Planning<br>Personal Journey Disciplines<br>Optimizing the Leader Within |
| The Healthcare Leadership Model | Inspiring shared purpose | Staying true to NHS principles and values<br>Holding to principles and values under pressure<br>Taking personal risks to stand up for the shared purpose<br>Making courageous challenges for the benefit of the service |
| | Leading with care | Caring for the team<br>Recognising underlying reasons for behaviour<br>Providing opportunities for mutual support<br>Spreading a caring environment beyond my own area |
| | Evaluating information | Gathering data<br>Scanning widely<br>Thinking creatively<br>Developing new concepts |
| | Connecting our service | Recognising how my area of work relates to other parts of the system<br>Understanding the culture and politics across my organisation |

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| | | Adapting to different standards and approaches outside my organisation<br>Working strategically across the system |
| | Sharing the vision | Communicating to create credibility and trust<br>Creating clear direction<br>Making long-term goals desirable<br>Inspiring confidence for the future |
| | Engaging the team | Involving the team<br>Fostering creative participation<br>Co-operating to raise the game<br>Stretching the team for excellence and innovation |
| | Holding to account | Setting clear expectations<br>Managing and supporting performance<br>Challenging for continuous improvement<br>Creating a mindset for innovative change |
| | Developing capability | Providing opportunities for people development<br>Taking multiple steps to develop team members<br>Building longer-term capability<br>Creating systems for succession to all key roles |
| | Influencing the results | Engaging with others to convince or persuade<br>Adapting my approach to connect with diverse groups<br>Developing collaborative agendas and consensus<br>Building sustainable commitments |
| The Clinical Leadership Competency Framework (NHS) | Demonstrating Personal Qualities | Developing self-awareness<br>Managing yourself<br>Continuing personal development<br>Acting with integrity |
| | Working with Others | Developing networks<br>Building and maintaining relationships<br>Encouraging contribution<br>Working within teams |
| | Managing services | Planning<br>Managing resources<br>Managing people<br>Managing performance |
| | Improving Services | Ensuring patient safety<br>Critically evaluating<br>Encouraging improvement and innovation<br>Facilitating transformation |
| | Setting Direction | Identifying the contexts for change |

| | | |
|---|---|---|
| | | Applying knowledge and evidence<br>Making decisions<br>Evaluating impact |
| The LEADS in a Caring Environment Framework (Canadian College of Healthcare Leaders) | Lead self (L) | Are self-aware<br>Manage themselves<br>Develop themselves<br>Demonstrate character |
| | Engage others (E) | Foster development of others<br>Contribute to the creation of healthy organization<br>Communicate effectively<br>Build teams |
| | Achieve Results (A) | Set direction<br>Strategically align decisions with vision, values and evidence<br>Take action to implement decisions<br>Assess and evaluate |
| | Develop Coalitions (D) | Purposefully build partnerships and networks to create results<br>Demonstrate a commitment to customers and service<br>Mobilize knowledge<br>Navigate socio-political environments |
| | Systems Transformation (S) | Demonstrate systems/critical thinking<br>Encourage and support Innovation<br>Orient themselves strategically to the future<br>Champion and orchestrate change |
| Leadership competencies (Oncology nursing society) | Personal Mastery | Introspection<br>Self-care<br>Authenticity<br>Lifelong learning<br>Adaptability |
| | Vision | Strategic thinking<br>Articulation of strategic direction<br>Inspiration |
| | Knowledge | Pursuit of knowledge<br>Translation of knowledge<br>Utilization of knowledge<br>Evaluation of outcomes |
| | Interpersonal Effectiveness | Relationship building<br>Caring<br>Balance |

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|---|---|---|
| | | Effective communication<br>Emotional intelligence |
| | Systems Thinking | Navigating change<br>Interprofessional collaboration<br>Technology<br>Stewardship<br>Quality<br>Diversity<br>Advocacy<br>Ethics |