NURSING

Competence of Nurses and Factors Associated With It

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Summary. *Objective. Nurse competence became a relevant topic for discussion among nurse practitioners and nurse researchers. However, the factors connected with nurse competence need deeper exploring. The aim of this study was to explore nurse competence and factors associated with it from the perspective of nurses for predicting the possible ways for upgrading the nursing practice.*

Materials and Methods. A multicenter, descriptive study was performed in 11 surgical wards of 7 Lithuanian hospitals. Data were collected from November 2007 to January 2008. Lithuanian nurses (n=218) who were working with patients after abdominal surgery participated in this study. The response rate was 91%. Two instruments, both originally developed in Finland, were used: the Nurse Competence Scale and the Good Nursing Care Scale for Nurses.

Results. The overall level of nurse competence and the frequency of using the competencies in practice as perceived by nurses were high. Nurses assessed the competencies in managing situations and work role the highest and in teaching-coaching and ensuring quality the lowest. Sociodemographic factors such as nurse education, experience, professional development, independence, and work satisfaction as well as the evaluation of quality of nursing care were identified as factors associated with nurse competence.

Conclusions. The findings of study allow us to make the assumption that nurse education, nurse experience, and nurse professional development play a significant role in the evaluation of nurse competence as well as the evaluation of quality of nursing care. It is necessary to upgrade nursing education programs at all levels of nursing education in Lithuania: university, non-university, and professional development courses. The qualities of preconditions for nursing care, cooperation with relatives, caring and supporting initiative are related to nurse competence.

Introduction

The abdominal perioperative/surgical nursing care requires a unique, highly developed set of knowledge, skills, and attitudes. Official documents of different countries show what kind of competence is expected from a nurse. In Lithuania, the competence of general practice nurse was defined in the Lithuanian Norm of Medicine MN: 28, 2004, "General Practice Nurse. Rights, Duties, Competence, and Responsibility" (1). According to this Norm of Medicine (1), professional competence of general practice nurse is a set of knowledge, abilities, and skills, which a nurse is achieving after graduating studies of general practice nursing with professional qualification and during permanent development according to evidence-based nursing. There is a lot of discussion in public that the competence of a nurse needs to be expanded and responsibilities should increase.

Lithuanian nurses, trained in the Soviet style, are technically competent but lack information and a grounding framework (2). However, considerable changes in nursing education have occurred after the declaration of Lithuanian Independency from the Soviet Union (2–3). Higher education is the requirement for nurses from 2010 (4). There are two types of higher nursing education institutions in Lithuania: universities (university level) and colleges (non-university level). In April 2009, the Seimas (Lithuanian Parliament) passed a new Law on Science and Studies, which provides for a major reform of higher education (5). There are still a lot of discussions in media and society about the nursing education, the competence of nurse, and the quality of nursing care.

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The competence of perioperative nurse is defined by the US Association of periOperative Registered Nurses (AORN) as knowledge, skills, and abilities to fulfill patient care activities before, during, and after operation (6). The concept of nurse competence has been also widely analyzed by many authors (7–13). Meretoja et al. (8–11) define nurse competence from three aspects: the ability of a nurse to practice in a specific role; the capacity to incorporate knowledge and skills into actual practice by integrating the cognitive, affective, and psychomotor domains of practice; and the professional development toward expertise. In some studies (11–13), nurse competence has been divided into clinical competence and professional competence. Furthermore, Cowan et al. (12) and Aari et al. (13) explored nurse competence in the review articles and concluded that nurse competence is a complex combination of knowledge, performance, skills, attitudes, and values; however, a holistic definition of competence needs to be agreed upon and operationalized (12–13). However, the clear definition what is the competence of perioperative/surgical nurse is need to be developed.

There are many factors associated with the evaluation of competence by nurses. Based on previous studies, nurses with higher education level (14) and working in the operating room (11) were more critical in the evaluation of their competence, but findings of other studies showed no associations between nurse educational level and evaluation of competence (15) or associations were positive (7). Furthermore, older nurses and nurses with longer work experience (11, 15–17) as well as nurse managers (10) evaluated their competence better. Previous studies indicated that most often clinical nurses and nurse managers (7–11, 13, 15, 16, 18) self-assessed their competence and usually nurse managers assessed higher than clinical nurses (10). It is important to explore all factors related to the competence of a nurse for getting comprehensive understanding how the background factors influence the competence of a nurse and how the competence may be developed by controlling these factors.

Nurse competence can be seen in association also with other factors. The association between the nurse competence and the quality of nursing care was found to be positive in previous studies (11–17). The quality of abdominal surgical/perioperative nursing care has been defined in previous studies from nurses' (19–27) and patients' perceptions (22, 27–29). It would be relevant to assume that those evaluating their competence higher would evaluate the quality of care in their ward higher. Competence standards are related with the quality of nursing care, and maintaining minimum standards may level down the quality of nursing care (12, 30). However, Salonen et al. (15) showed that competence in the ensuring quality was assessed the lowest

by nurses. We need the competence assessment because it significantly improves the quality of patient care and increases nurse opportunities for professional growth and career development (10). There is a lack of literature about the relationship between the surgical nurse competence and the quality of nursing care. This relationship needs to be explored in more details for gaining the knowledge how to improve the nursing education and practice.

The aim of this study was to evaluate the competence of nurse and factors associated with it from the perspective of nurses working in abdominal surgical units for predicting the possible ways to upgrade the nursing practice.

The research questions for this study were as follows:
1. What is the level of the competence of nurses?
2. How are frequently nurses using the competencies in practice?
3. What background factors are associated with nurses' perceptions of their competence?
4. What is the relationship between the competence of nurse and the quality of nursing care?

Material and Methods

A multicenter, descriptive study was performed in 11 abdominal surgical wards of 7 Lithuanian hospitals. The data were collected between November 2007 and January 2008. One of researchers (N.I.) personally came to all hospitals and left the questionnaires in wards. One person was responsible for collection of the data in one unit. All Lithuanian registered nurses (N=270) who were working with patients after abdominal surgery in these units were invited to participate in the study. A total of 247 questionnaires were returned. The response rate was 91%. A total of 218 responses were analyzed (n=218).

Instruments. The competence of nurses was evaluated by using an instrument – Nurse Competence Scale (NCS) – originally developed in Finland, (8). The NCS consists of 7 categories (73 items): 1) helping role; 2) teaching-coaching; 3) diagnostic functions; 4) managing situations; 5) therapeutic interventions; 6) ensuring quality; and 7) work role. The competence categories were derived from Benner's (31) competency framework. The level of competence is measured with a visual analogue scale (VAS), where 0 means a very low level of competence and 100 means a very high level of competence. The frequency with which the competencies are actually used in clinical practice is indicated on a 4-point scale (0=not applicable, 1=very seldom, 2=occasionally, 3=very often). For descriptive purposes, the VAS 0-100 is divided into four parts to represent the level of nurses' competence as low (0–25), rather good (>25–50), good (>50–75), and very good (>75–100).

In connection of the NCS, there were also background factors included into the instrument. As sociodemographic factors, respondents' age and family status were recorded. There were also factors related to education, license, and professional development as well as those related to workload in the hospital, level of independence, and level of work satisfaction. We were also interested to see the association between the evaluation of competence and evaluation of the quality of nursing care in the words. For evaluating the quality of nursing care, the Good Nursing Care Scale for Nurses (GNCS-N) (28) was used. This instrument was developed by Finnish researchers. The GNCS-N consists of 7 categories and 13 subcategories (64 items): 1) staff characteristics; 2) task-oriented activities; 3) human-oriented activities; 4) preconditions; 5) progress of nursing process; 6) environment; and 7) cooperation with relatives. The responses were obtained on a 6-point Likert-type scale from "always" (=6) to "never" (=1). Number 0 represented the choice "I cannot evaluate this aspect."

Both the NCS and the GNCS-N were adapted to the Lithuanian context according to all requirements (32): first, they translated by one of researchers from English to Lithuanian; second, back-translation procedure was performed; and third, monolingual test was conducted (33). Face validity of the instruments was performed by two groups: nursing master students (n=10) and nursing teachers (n=23) at the university level. The principal component analysis (PCA) and factor analysis were carried out to examine construct validity of the instruments. For testing the instruments and design, a pilot study including 114 nurses was done in 3 abdominal surgical departments of one large Lithuanian University Hospital in 2006 (response rate, 95%). Based on that, some corrections were made because Cronbach alpha values for the GNCS-N ranged from 0.352 to 0.928. The value for the NCS was 0.930. Power analysis (PASS, 2005) was used to compute the sample size of nurses to explore the quality of abdominal perioperative nursing care and nurse competence. A power analysis was conducted to determine the number of participants needed for this study. To achieve power of 0.80 and a medium effect size (f=0.35), a total sample size of 159 is required to detect a significant model (F (2, 156)=3.05).

Ethical Considerations. All ethical standards of research were followed according to the Word Medical Association Declaration of Helsinki (2008) and the Lithuanian Bioethics Committee (LBEC) requirements (34, 35). The permission to carry out the research was obtained from heads of Hospitals and the approval to perform the study was received from the LBEC (March 24, 2006; No. 13). Permissions to use the NCS and the GNCS-N were re-ceived from the copyholders.

Statistical analysis. Statistical data analysis was performed with the Statistical Package for Social Sciences for Windows (SPSS, version 12.0; SPSS Inc., Chicago, IL, USA) software package. Descriptive analyses (mean, standard deviation, range, and frequency tables) were carried out to understand the background variables of nurses. Sum variables were formed according to 7 quality categories and 7 competence categories. Afterward, they were calculated by summing up the values obtained for the items and then dividing the sum by the number of variables. An overall VAS score was calculated as the mean value of the average competencies assessed for seven categories. Cronbach alpha coefficients were used to check the reliability of the whole instrument and sum variables. Associations between variables were determined by means of Spearman correlation. A significance level of P<0.05 was set during the analysis of statistical hypotheses. Factor analysis was performed for the evaluation of structural validity. Construct validity was tested with principal component analysis (PCA).

Results

Background Characteristics. The typical nurse respondent was 39 years old (range, 22–62 years) and had been employed in abdominal perioperative nursing for 17 years (range, 0–40 years) (Table 1). The majority of nurses (77%) lived with a partner or family. Only 8% of respondents graduated university (bachelor degree); only 1% had master degree of nursing science. Almost all respondents had general practice nurse license. All nurses finished courses during the last 5 years with the goal to develop their professional competence. "Clinical Skills Improvement" (90%) and "Upgrading the Quality of Perioperative Care" (63%) were the most popular courses. More than half of the respondents were working more than full time. The majority of nurses (60%) indicated that the level of their satisfaction with work was high.

The Level of Nurse Competence as Perceived by Nurses. The overall level of nurse competence was high (mean VAS, 72.2; range, 68.0 to 79.7) (Table 2). Next, the results are presented according to competence categories, and the highest and lowest items in these categories are presented. Nurses indicated that their competence was highest in the *managing situations* and *work role*. The competencies of *ensuring quality* and *teaching-coaching* were assessed somewhat lower, but still on a high level.

Managing situations was ranked as the highest in perioperative settings. The ability to recognize situations posing a threat to life (mean, 82.8) as well as the keeping nursing care equipment in good condition were rated the highest. Nurses practicing in perio-

Table 1. Background Factors of Respondents (n=218)

Factor	n	%
Family status	218	100
Single	50	23
Not single	168	77
Education	216	100
Medical school*	147	68
College**	49	23
University (Bachelor degree)	18	8
University (Master degree)	2	1
License	218	
General practice nurse	197	90
Anesthetist and intensive care nurse	46	21
Operating theatre nurse	35	16
Other	5	2
Professional development		
Courses attended during last 5 years		
Clinical skills improvement course	197	90
Communication course	103	47
Ethics course	68	31
Management course	25	12
Course of upgrading the quality of periop-	137	63
erative care		
Personal workload in this hospital	218	100
Less than 0.5 full working time		
0.5–0.75 full working time	7	3
1.0 full working time	95	44
More than 1.0–1.5 full working time	114	52
More than 1.5 full working time	2	1
Level of independence at work	214	100
Very high	5	2
Rather high	74	34
Average	101	47
Low	21	10
Nonexistent	13	6
Level of satisfaction with work	218	100
Very high	13	6
Rather high	117	54
Average	75	34
Low	8	4
Nonexistent	5	2

*This is education for nurses who had graduated before 2001. All medical schools became colleges after education reform, part of them were liquidated.
**This level is non-university degree. Nurses can accomplish education at the colleges or at the universities.

perative settings were able to orchestrate the whole situation when needed (mean, 80.3), but only occasionally they were able to coordinate nursing students (mean, 65.0). In *diagnostic functions*, coaching other staff members in use of diagnostic equipment

was evaluated the highest by nurses (mean, 76.8) and the ability to identify patient's need for emotional support – the lowest (mean 65.1). In *helping role*, nurses assessed the development of treatment culture of the unit the highest (mean, 74.7) and evaluating critically own philosophy in nursing the lowest (mean 67.0). In competence of *therapeutic interventions,* making decisions concerning patient care taking the particular situation into account was assessed the highest (mean, 81.5), and contributing to further development of multidisciplinary clinical paths was evaluated the lowest (mean, 63.4).

Ensuring quality and *teaching-coaching* competencies were assessed somewhat lower but still on a high level in perioperative settings. Nurses reported that they were not able to critically evaluate care philosophy in their unit (mean, 64.7) and they rarely use this competence in practice. Nurses rated their competence as the lowest in the evaluation of patient education outcomes with the family (mean, 63.1) and the developing orientation programs for new nurses (mean, 63.1) and did not use these competencies in practice frequently. However, taking active steps to maintain and improve nurses' professional skills was assessed on a very high level (mean, 81.1) and was often used in practice.

The Frequency of Using Competencies in Practice as Perceived by Nurses. The majority of nurses (86%) frequently used the competencies in their clinical practice (Table 2). The frequency of using the competences of *managing situations* and *work role* was the highest, and the frequency of using the competencies of *ensuring quality* and *teaching-coaching* was the lowest.

The majority of surgical nurses were often using their competencies of *managing situations* and *work role* in their clinical practice (92% and 87%, respectively). The frequency of using the competencies of *ensuring quality* and *teaching-coaching* was the lowest.

Factors Associated With Nurses' Perceptions of Nurse Competence. Several factors such as sociodemographic factors and nurse perceptions of the quality of nursing care were explored as related to nurse competence.

Several sociodemographic background variables

Table 2. The Level of Nurse Competence (n=218)

Category	Cronbach Alpha	Level of Competence		Frequency of Using Competencies in Practice (%)
		Mean	SD	
Managing situations	0.91	79.7	19.9	92.2
Work role	0.95	73.3	20.4	87.2
Therapeutic interventions	0.90	72.8	21.5	84.9
Diagnostic functions	0.87	71.7	22.8	80.7
Helping Role	0.92	71.5	24.6	84.4
Ensuring quality	0.88	68.7	25.3	79.4
Teaching-coaching	0.96	68.0	25.7	78.0
Overall competence	0.94	72.2	19.7	85.8

were associated with nurse competence ($P<0.05$). Nurses with higher education as well as those who completed additional educational courses based on professional development better assessed the competence in general and some competencies separately. For example, nurses who graduated the college or university used the competencies of *quality ensuring* in practice more frequently than nurses who graduated the medical school ($P<0.05$). Nurses who completed the communication course rated better their competence in *teaching-coaching* and using of *diagnostic functions* and *managing situations*, and nurses who completed ethics course generally assessed their overall competence higher than other nurses ($P<0.05$). In addition, nurses with high level of independence at work better assessed their overall level of competence ($P<0.05$), and nurses with higher satisfaction with work used the competencies of *teaching-coaching* and *work role* in practice more frequently.

However, some background variables showed a negative relationship with nurses' viewpoint of nurse competence. For example, nurses who had the operating theatre license assessed their competencies of *helping role* and *diagnostic functions* lower than nurses with other licenses. Nurses who completed course of "Improving the Clinical Skills" evaluated used the competencies of *managing situations* and *quality ensuring* rarely than other nurses ($P<0.05$).

Evaluations of the competence were associated with the evaluations of the quality of nursing care. The quality of nursing care was divided into subcategories, and significant correlations were determined. The overall quality of abdominal perioperative/surgical nursing care (Table 3) was highly assessed by nurses (mean, 4.71; range, 1–6). The quality in *environment* and *preconditions for nursing care* was evaluated the highest, and the *cooperation with relatives/significant others* and the *progress of the nursing process* were rated the lowest. The correlations between nurse competence and the quality of nursing care was identified in all categories of competence, but there was no consistent (systematic) pattern related to the categories of quality (Table 4).

The correlation between nurse competence and the following categories/subcategories was found: a) the task-oriented activities/supporting initia-

Table 3. The Quality of Abdominal Perioperative Nursing Care as Perceived by Nurses

Category	n	Cronbach Alpha	Mean	SD	Min	Max
Environment	217	0.640	5.20	0.91	1.00	6.00
Preconditions	218	0.883	4.93	0.75	2.25	6.00
Human-oriented activities	218	0.840	4.89	0.93	1.00	6.00
Staff characteristics	218	0.921	4.81	0.72	1.33	6.00
Task-oriented activities	218	0.900	4.55	0.92	1.25	6.00
Progress of nursing process	211	0.899	4.35	0.89	1.00	6.00
Cooperation with relatives	207	0.958	4.25	1.14	1.00	6.00
Overall quality		0.863	4.71	0.89	1.00	6.00

Table 4. Correlation Between Nurse Competence and Quality of Abdominal Perioperative Nursing Care
(Correlation Matrix Spearman rho)

Categories of competence		Nurse Competence						
Categories of quality	Subcategories of quality	Helping Role	Managing Situations	Diagnostic functions	Work role	Teaching–coaching	Therapeutic interventions	Ensuring quality
Staff characteristics	Staff characteristics	0.186**	0.093	0.173*	0.192**	0.187**	0.135*	0.190**
Task-oriented activities	Physical activities	0.167*	0.179**	0.138*	0.086	0.069	0.066	0.078
	Educational activities	0.145*	0.120	0.239**	0.194**	0.188**	0.195**	0.190**
	Supporting initiative	0.226**	0.179**	**0.305****	**0.254****	**0.278****	**0.266****	**0.291****
Human-oriented activities	Respect	0.136*	0.174*	0.188**	0.167*	0.096	0.088	0.157*
	Caring	**0.285****	**0.261****	**0.269****	0.230**	**0.255****	0.223**	**0.249****
	Advocacy	0.200**	0.085	0.186**	0.165*	0.162*	0.164*	0.182**
	Encouragement	0.228**	0.157*	0.231**	0.210**	0.191**	0.100	0.258**
Preconditions	Preconditions	**0.261****	**0.288****	**0.303****	**0.324****	**0.261****	**0.299****	**0.312****
Progress of nursing process	Progress of nursing process	0.220**	0.144*	**0.250****	0.224**	0.197**	0.153*	0.240**
Environment	Physical environment	0.231**	0.243**	0.225**	**0.256****	0.193**	**0.270****	0.243**
	Social environment	0.163*	0.191**	0.161*	0.111	0.161*	0.114	0.113
Cooperation with relatives	Cooperation with relatives	**0.253****	**0.308****	**0.351****	**0.300****	0.234**	**0.273****	**0.307****

**$P<0.01$; *$P<0.05$.

tive (Spearman rho from 0.179 to 0.305, $P<0.01$); b) preconditions for nursing care (Spearman rho from 0.261 to 0.324, $P<0.01$); and c) cooperation with relatives (Spearman rho from 0.234 to 0.351, $P<0.01$). A positive correlation between the quality in supportive initiative and competence in diagnostic functions ($P<0.01$) as well as between the quality in co-operation with relatives and competence in managing situations ($P<0.01$) was identified.

Discussion

The aim of this study was to explore nurse competence and factors associated with it from the perspective of nurses for predicting the possible ways for upgrading the nursing practice. The overall level of nurse competence, the frequency of using the competence in practice, and the quality of abdominal perioperative care were assessed on a good level by nurses as in previous studies (7–10, 15, 16, 18, 19, 23–25, 29).

Limitations of Study. This study has some limitations related to validity and reliability. The evaluation of nurse competence was made only by clinical nurses who have a subjective view to themselves. Managers, other health care providers, and patients should be involved in future studies aimed to assess nurse competences. However, the data were collected from 11 different surgical units, and almost all nurses working in the field of abdominal surgery were involved in the study. It was the first validation of the NCS and GNCS-N in Lithuania, and cultural and environmental factors could limit the generalizations that can be made from empirical findings. The principal component analysis of the NCS supported the structure of validity only partly: the part of questionnaire with VAS supported the structure of the instrument; however, the factors in the Likert scale (from 0 to 3) were not identical to the theoretical categories. The factor analysis of the GNCS–N supported the structure of instrument with minor nonconformity: five conformable factors were identified for items of seven original categories; 11 items were attributed to other categories.

Nurse Competence as Self-Assessed by Nurses. The overall nurse competence and frequency of using the competences in practice were assessed higher by Lithuanian than Finnish nurses, as indicated in the studies by Meretoja et al. (8–11) and Salonen et al. (15), and Italian nurses, as indicated in a study by Dellai et al. (16), but lower than by Australian nurses as it is reported in a study by Cowin et al. (18). Nurse competencies in *managing situations* were assessed the highest by nurses, the same as in the study by Meretoja et al. (8); competencies in *teaching-coaching* were assessed the lowest. However, these findings are not confirmed by other studies (15, 16, 18), where nurses assessed the competen-

cies in *helping role* the highest and competencies in *ensuring quality* and *work role* the lowest. The educational competence (teaching-coaching) of Lithuanian nurses need to be improved. This competence is essential for competence development (12, 14, 15).

The Frequency of Using Competencies in Practice as Perceived by Nurses. Most often in their clinical practice, the nurses reported that they used *managing situations* (8, 15) and *work role*, contrary earlier studies (11, 16). It was an interesting finding that the level of nurse competence and the frequency of using the competencies in practice almost in all categories were assessed the same by nurses as in previous studies (8, 11). However, the level of competence in *diagnostic functions* was evaluated higher than that of *helping role*, but the frequency of using these competencies was not so high (15). These differences between nurse perceptions of their competence and the frequency of using competencies in practice may show that not all competencies are relevant in the practical work of surgical nurses, but they are important for general nurse competence.

Factors Associated With Nurses' Perceptions of Their Competence. The associations between background factors and nurse competence were identified in previous studies (7–11, 15, 16, 18). Contrary to our findings, Salonen et al. reported that nurses with different education had similar assessments of their competence (15), but a study by Švedienė et al. (7) confirmed our results. Nurses who completed some professional development courses to improve their skills were more critical in their evaluation of competence (14). Operating theatre nurses ranked the competencies in *helping role* and *diagnostic functions* worse, similarly to a study of Meretoja et al. (11), which revealed that operation room nurses assessed the use of competencies in *diagnostic functions* and *teaching-coaching* lower. The evaluation of nurse competence was related to the type of educational course, but not generally to nurse professional development. For example, after graduating the courses of "Improving the Clinical Skills," nurses were more critical in their evaluation, but after graduating the course of "Nursing Ethics," they evaluated their competence better. The nurse educational level, professional development, and working experience may have a positive as well as negative influence on nurse perceptions of their competence.

A statistically significant, but weak, correlation between the nurse competence and the quality of abdominal perioperative nursing care was determined. When surgical nurses' perceptions of their competence were positive and high, the quality of nursing care was also evaluated higher as perceived by nurses (e.g., 11, 16). The improvement of qualities in the task-oriented nursing activities, preconditions, and cooperation with relatives may lead to

better competence of a surgical nurse.

Conclusions

Generally, the level of nurse competence and the frequency of using the competencies in practice were high as perceived by nurses. Comparison with other studies showed that nurses' self-assessment of their competence has national characteristic features, probably because of differences in nursing culture traditions, nursing care process, nurses' education traditions and levels. Furthermore, it is necessary to upgrade the nurse competencies of teaching–coaching and ensuring quality, and in future studies, it is important to involve not only nurses, but also patients, managers, and other health care providers.

The findings of study allow us to make the assumption that nurse education, nurse experience, and nurse professional development play a significant role in the evaluation of nurse competence. It is necessary to improve nursing education programs at all levels of nursing education in Lithuania: university, non-university, and professional development courses. The study highlights the importance of assessment of association between the competence of nurse and quality of nursing care. Qualities in preconditions for nursing care, co-operation with relatives, caring and supporting initiative are the key qualities for increasing and developing nurse competencies.

Statement of Conflict of Interest
The authors state no conflict of interest.

Slaugytojų kompetencija ir su ja susiję veiksniai

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Raktažodžiai: slaugytojų kompetencija, su slaugytojo kompetencija susiję veiksniai, abdominalinė chirurginė slauga, slaugos kokybė.

Santrauka. Slaugytojo kompetencija – aktuali slaugos mokslininkų ir praktikų diskusijų tema. Tačiau veiksniai, susiję su slaugytojo kompetencija, mažai ištirti.

Tyrimo tikslas. Ištirti slaugytojų kompetenciją ir su ja susijusius slaugytojų veiksnius siekiant nustatyti slaugos praktikos gerinimo būdus.

Medžiaga ir metodai. Aprašomasis multicentrinis tyrimas atliktas septynių Lietuvos ligoninių vienuolikoje pilvo chirurgijos skyrių. Duomenys rinkti 2007 m. lapkričio – 2008 m. sausio mėn. Lietuvos slaugytojai (n=218), prižiūrintys pacientus po pilvo operacijų, dalyvavo apklausoje. Klausimynų grįžtamumas – 91 proc. Apklausai naudojamos dvi skalės, sukurtos Suomijoje: Slaugytojų kompetencijos skalė (NCS) ir Geros slaugos skalė (GNCS).

Rezultatai. Slaugytojų kompetencija ir slaugos kompetencijų panaudojimo praktikoje dažnis buvo aukštai įvertintas slaugytojų. Slaugytojai aukščiausiai įvertino situacijų valdymo kompetencijas ir darbo vaidmenį, žemiausiai – mokymą/instruktavimą ir kokybės užtikrinimą. Socialiniai ir demografiniai respondentų veiksniai, tokie kaip, slaugytojų išsilavinimas, profesinis tobulinimasis, darbo patirtis, nepriklausomumas darbe, darbo pasitenkinimas ir bendras slaugos kokybės vertinimas buvo identifikuoti kaip veiksniai, susiję su slaugytojų kompetencija.

Išvados. Remiantis tyrimo rezultatais, galima daryti prielaidą, kad slaugytojų išsilavinimas, darbo patirtis, profesinis tobulinimasis ir slaugos kokybės užtikrinimas – tai svarbiausi veiksniai slaugytojo kompetencijai vertinti. Slaugytojų mokymo ir profesinio tobulinimosi programos turėtų būti tobulinamos siekiant užtikrinti slaugytojų išsilavinimą, atitinkantį Europos Sąjungos reikalavimus. Slaugos prielaidos, bendradarbiavimas su artimaisiais, rūpinimasis bei paramos iniciatyva – esminiai slaugos kokybės komponentai, turintys įtakos slaugytojų kompetencijai.

References

1. Lietuvos medicinos norma MN: 28: „Bendrosios praktikos slaugytojas. Teisės, pareigos, kompetencija ir atsakomybė". 2004 m. birželio 14 d. Nr. V-437, Vilnius. (Order of Lithuanian Minister of Health Care No. V-437, Lithuanian Norm of Medicine MN 28: "General Practice Nurse. Rights, Duties, Competences, and Responsibility.")
2. Karosas LM. Nursing in Lithuania as perceived by Lithuanian nurses. Nursing Outlook 1995;43:153-7.
3. Kalnins I, Barkauskas VH, Šeškevicius A. Baccalaureate nursing education development in 2 Baltic countries: outcomes 10 years after initiation. Nursing Outlook 2001;49: 142-7.
4. Lietuvos Respublikos slaugos ir akušerijos praktikos įstaty-

mas Nr. XI–343. 2009 liepos 14 d. (Decree of Nursing and Midwifery Practice of the Republic of Lithuania No. XI-343. 14/07/2009.)

5. Lithuanian Ministry of Education and Science. Celebrating Lithuania's Millennium: overview of the system of education and science. 2009. Available from: URL: http://www.smm.lt/en/stofedu/docs/N1_Leidiniui%20Best%20in%20Lithuania_ENGMINISTERIJAI.pdf

6. AORN. Standards, Recommended Practices & Guidelines. 2004; AORN, Inc.

7. Švedienė L, Jankauskienė L, Kušleikaitė M, Razbadauskas A. Competence of general practice nurse caring for patients with mental health problems in the somatic departments. Medicina (Kaunas) 2009;45(10):822-9.

8. Meretoja R, Isoaho H, Leino-Kilpi H. Nurse Competence Scale: development and psychometric testing. J Adv Nurs 2004;47(2):124-33.

9. Meretoja R, Leino-Kilpi H. Instruments for evaluating nurse competence. J Nurs Adm 2001;31(7/8):346-352.

10. Meretoja R, Leino-Kilpi H. Comparison of competence assessments made by nurse managers and practising nurses. J Nurs Manag 2003;11:404-9.

11. Meretoja R, Leino-Kilpi H, Kaira AM. Comparison of nurse competence in different hospital work environments. J Nurs Manag 2004;12:329-36.

12. Cowan DT, Norman I, Coopamah VP. Competence in nursing practice: a controversial concept – a focused review of literature. Nurse Educ Today 2005;25(5):355-62.

13. Aari RL, Suominen T, Leino-Kilpi H. Competence in intensive and critical care nursing: a literature review. Intensive Crit Care Nurs 2008;24:78-89.

14. Currie V, Harvey G, West E, McKenna H, Keeney S. Relationship between quality of care, staffing levels, skill mix and nurse autonomy: literature review. J Adv Nurs 2005;51(1):73-82.

15. Salonen AH, Kauhonen M, Meretoja R, Tarkka MT. Competence profiles of recently registered nurses working in intensive and emergency settings. J Nurs Manag 2007;15: 792-800.

16. Dellai M, Mortari L, Meretoja R. Self-assessment of nursing competencies – validation of the Finnish NCS instrument with Italian nurses. Scand J Caring Sci 2009;23(4):783-91.

17. McCaughan E, Parahoo K. Medical and surgical nurses' perceptions of their level of competence and educational needs in caring for patients with cancer. J Clin Nurs 2000; 9:420-8.

18. Cowin LS, Hengstberger-Sims C, Eagar SC, Gregory L, Andrew S, Rolley J. Competency measurements: testing convergent validity for two measures. J Adv Nur 2008;64(3): 272-7.

19. Leino-Kilpi H. Basis of the quality of nursing care. A short quantitative description. Scand J Caring Sci 1992;6(3):139-45.

20. Needleman J, Buerhaus P, Mattke S, Stewart M, Zelevinsky K. Nurse-staffing levels and the quality of care in hospitals. N Eng J Med 2002;346(22):1715-22.

21. Al-Kandari F, Thomas D. Perceived adverse outcomes correlated to nurses' workload in medical and surgical wards of selected hospitals in Kuwait. J Clin Nurs 2008;18:581-90.

22. Zagurskienė D, Misevičienė I. Pacientų ir slaugytojų nuomonės apie sveikatos mokymą ir slaugytojų dalyvavimą šiame procese palyginimas. (The comparison of patients' and nurses' attitudes to health education and nurses' participation in this process.) Medicina (Kaunas) 2008;44(11):885-94.

23. Zhao SH, Akkadechanunt T, Xue XL. Quality nursing care as perceived by nurses and patients in a Chinese hospital. J Clin Nurs 2008;18:1722-8.

24. Leinonen T, Leino-Kilpi H, Stahlberg MR, Lertola K. Comparing patient and nurse perceptions of perioperative care quality. Appl Nurs Res 2003;16(1):29-37.

25. Leinonen T, Leino-Kilpi H, Stahlberg MR, Lertola K. The quality of perioperative care: perceptions of nursing staff. J Adv Prioper Care 2002;1(1):5-12.

26. Sochalski J. Is more better? The relationship between nurse staffing and the quality of nursing care in hospitals. Med Care 2004;42(2 Suppl):II67-73.

27. Leinonen T, Leino-Kilpi H, Stahlberg MR, Lertola K. The quality of perioperative care: development of a tool for the perceptions of patients. J Adv Nurs 2001;35(2):294-306.

28. Leino-Kilpi H, Vuorenheimo J. The patient's perspective on nursing quality: developing a framework for evaluation. Int J Qual Health Care 1994;6(1):85-95.

29. Brogienė D, Gurevičius R. Inpatients' opinion on quality of health care. Medicina (Kaunas) 2009;45(3):226-37.

30. McAllister M. Competency standards: clarifying the issues. Contemp Nurse 1998;7(3):131-7.

31. Benner P. From novice to expert. Excellence and power in clinical nursing practice. Menlo Park, California CA: Addison-Wesley; 1984.

32. Parahoo K. Nursing research. Principles, process and issues. 2nd ed. New York: Palgrave Macmillan; 2006.

33. Maneesriwongul W, Dixon JK. Instrument translation process: a methods review. J Adv Nurs 2004;48(2):175-86.

34. Word Medical Association Declaration of Helsinki. 59th WMA General Assembly, Seoul, October 2008. Available from: URL: http://www.wma.net/en/30publications/10policies/b3/index.html

35. Lithuanian Law on Ethics of Biomedical Research No. VIII-1679. 2007. New edition No. X-1325. Available from: URL: http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=326057