

# REVIEW

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## Research on the Quality of Abdominal Surgical Nursing Care: A Scoping Review

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**Key words:** quality of nursing care; surgical care; abdominal care; scoping review.

**Summary.** Various health care measures have been identified over the years as indicators of health care quality. However, studies evaluating the quality of nursing care among different patient groups are scarce. Patients undergoing abdominal surgery may be a group that has different views, needs, expectations, and evaluation of the quality of nursing care.

Literature search was conducted using the following key words in various combinations in the MEDLINE, PsycInfo, CINAHL, and Cochrane databases: quality of nursing, surgical or perioperative, abdominal or abdomen. The studies that focused on the evaluation of surgical nursing care with a study sample of patients undergoing abdominal surgery and nurses taking care of these patients were included in this scoping review. In total, 17 research articles were analyzed. The analysis revealed that the quality of nursing care was usually rated as high according to the perceptions of patients and/or nurses. The following factors associated with the quality of nursing care were identified: nurse staffing, organizational characteristics, patients' characteristics, nurses' characteristics, nursing care needs, and nursing documentation. Further research should be focused on the measurement and evaluation of the quality of abdominal surgical nursing care from nurses', patients' and their relatives' perceptions by using nonexperimental and experimental study designs for gaining the knowledge how to improve the quality in practice.

### Introduction

According to statistics of different countries, the number of patients in need of abdominal surgery has increased during the last 10 years, leading to higher rates of these surgical procedures (1, 2). Abdominal surgical procedure is one of the most common surgical procedures in Europe and the United States (1, 3). In Lithuania, abdominal surgery ranked second among all surgical procedures in 2009 (1226 procedures per 100 000 population), following surgeries of the musculoskeletal system (1463 procedures per 100 000 population) (4). Because so many patients need abdominal surgery, it is important to measure and improve the quality of abdominal surgical nursing care in order to achieve high-quality health services, to shorten patient hospitalization period, and to have economically more effective health care system.

Abdominal surgery (major and minimally invasive) is a conceptually unique health intervention due to the significant risk of death, the likelihood of pain and other distressing symptoms, the possibility of disability, and the planned nature of procedure (5). It is vitally important that a nurse who takes care of a patient preoperatively, intraoperatively,

and postoperatively 24 hours per day could provide him/her with high-quality nursing care. The quality of surgical nursing care around the world depends on skills and knowledge of surgical nurses. They usually have specific expertise in a specialty service (6). As a large number of nurses are involved in this area, it is economically important to have a highly skilled professional (7).

Various definitions of the quality of health care have been proposed from different perspectives – health care providers and customers – over the years (7–11). Several studies related to the quality of health care have been focused particularly on patient satisfaction (10). Patient-perceived quality has been reported to be a subjective, dynamic patient perception of the extent to which expected health care is received (11). High-quality care is the right of all patients and the responsibility of all nurses (12) and could be defined as care that is provided according to hospital standards and job requirements (13).

The measurement and improvement of the quality of nursing care is a process, when the attitudes of all health care providers (nurses, physicians, other specialists), patients and their relatives are impor-

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tant (14–18). It is a core concern for health care providers and consumers (19). Various health care measures have been identified as indicators of the quality of health care over the years (20). However, studies evaluating the quality of nursing care among different patient groups are scarce (21, 22). Patients undergoing abdominal surgery may be a group that has different views, needs, expectations, and evaluation of the quality of nursing care.

This scoping review focused on the quality of abdominal surgical nursing care from patients' and nurses' perceptions and factors related to the quality of nursing care. The aim of this article was to analyze the methodological characteristics and main findings of studies in the field of the quality of abdominal surgical nursing care with the ultimate goal to gain the knowledge about the quality of abdominal surgical nursing care for developing recommendations for further nursing research, education, and practice and for improvement of the quality in practice.

The following research questions will be responded: "What are the methodological characteristics of studies?" and "What are the main findings of studies?"

## Material and Methods

**Methods.** Data collection procedures included literature search in the MEDLINE (Ovid), PsycInfo (Ovid), CINAHL, and Cochrane databases using the following key words in various combinations: *quality of nursing, surgical or perioperative, abdominal or abdomen*. These databases were selected because of their comprehensiveness (23–25). Studies addressed to research questions were included if they met the following inclusion criteria: human studies, published in electronic format (on-line), focused on the quality of abdominal surgical nursing care or on the quality of surgical nursing care including abdominal surgical nursing care, peer-reviewed, written in English (Fig.).

**Screening.** A total of 161 articles were screened based on their titles (Fig.). In this scoping literature review, analysis was carried out on a final sample of 17 articles, which were obtained in full text. The exclusion and inclusion criteria were not based on the quality of the studies, but on relevance (26, 27). The data were extracted onto a standardized form. All data from the included studies were charted, and themes and key issues were identified.

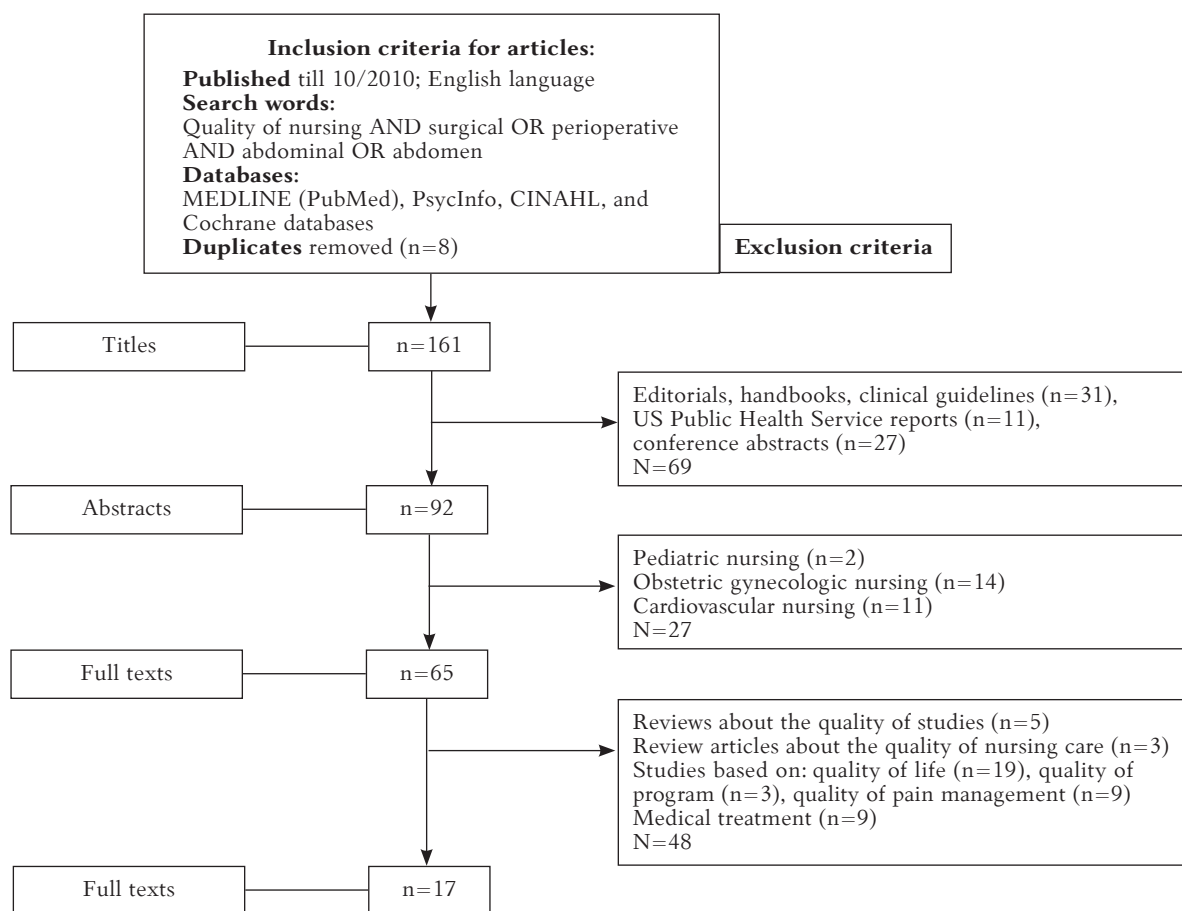


Fig. Process of selecting the articles

The analyzed studies (n=17) were conducted in different countries from three continents (Table 1): North America, Europe, and Asia, with the greatest number being from the United States (n=8). Six studies originated from Asia, two from Taiwan, one from Korea, one from Jordan, one from Kuwait, and one from China. Three studies were carried out in Europe: two of them in Finland and one in Spain.

Table 1. Characteristics of Studies

First Author, Year, Country	Sample		Study Design	Instrument	Data Analysis	Reliability Cronbach Alpha	Validity
	Patients	Nurses					
1	2	3	4	5	6	7	8
Cho et al., 2009, Korea	–	n=65 nurse managers n=1365 charge and staff nurses	Descriptive cross-sectional design	Questionnaire included characteristics of hospital, ICU and nurses' perception of staff adequacy, quality of care and three job outcomes (job satisfaction, burnout, plan to leave) Maslach Burnout Inventory – Human Services Survey (Maslach and Jackson, 1986; Maslach et al., 1996)	Descriptive statistics <i>t</i> tests Multi-level logistic regression models	–	–
Lee et al., 2009, Taiwan	–	n=24 clinical preceptors n=34 new nurses	Quasi-experimental design	Personnel databank of the hospital Indicators of quality of nursing care included medication error rate data, the number of fall and the incident rate and Patients' Satisfaction toward Nursing Care instrument (Hsieh, 1996) Satisfaction of preceptor's teaching behavior modified from Teaching Encounter Card (Kernan et al., 2004) and Residency Program Evaluation Tool (Santucci, 2004) Preceptor's perception scale modified from Preceptor's Perception of Benefits and Rewards Scale, Preceptor's Perception of Support Scale, and Commitment to the Preceptor Role (Dibert and Dolly, 1995)	Descriptive statistical analysis <i>t</i> tests	0.86	CVI=0.92
						0.90	CVI=0.86
						0.89	CVI=0.87
Lucero et al., 2009, USA	–	n=10 184 nurses	Descriptive comparative design (a secondary analysis in 2008 of data collected in 1999)	Questionnaire included items: patient workload, perception about burnout, job satisfaction and perceptions of nursing quality The practice Environment Scale of the Nursing Work Index (PES-NWI) (Lake 2002)	Descriptive statistics Univariate statistics Successive analysis ANOVA ANCOVA	0.73	–
Zhao et al., 2008, China	n=383 medical-surgical patients	n=221 nurses	Descriptive comparative design	Perception of Quality Nursing Care Scale (PQNCS, modified version of Good Nursing Care Scale, Leino-Kilpi, 1996 and Patients' Perception of Quality Scale-Acute Care Version, Lynn and McMillen, 1999)	Descriptive and inferential statistics Mann-Whitney <i>U</i> test	0.80 (nurses) 0.79 (patients)	Content validity (5 experts) CVI=0.93 (nurses) CVI=0.91 (patients)
Lynn et al., 2007, USA	n=1470 medical-surgical patients	n=383 nurses	Descriptive design	Developed from qualitative interviews (How would you describe or define quality nursing care?) with the questionnaire Patient's Assessment of Quality Scale-Acute Care Version (PAQS-ACV)	Descriptive statistics A principal axis factor analysis Test-retest	0.83–0.94	Content validity Construct validity
Mrayyan, 2006, Jordan	n=250	n=120 nurses n=24 head nurses	Descriptive cross-sectional comparative design	Mueller/McCloskey Satisfaction Scale (MMSS) 1990 Eriksen's (1988) scale of The Satisfaction with Nursing Care – Quality of Nursing Care Questionnaire-Head Nurse (Safford and Schlotfeldt, 1960)	Descriptive statistics <i>t</i> tests Pearson product moment correlations	0.84 0.88 0.71	Content validity Construct validity Criterion-related validity

Table 1. Characteristics of Studies (continuation)

1	2	3	4	5	6	7	8
Sochalski, 2004, USA	–	n=8670	Descriptive comparative design (a secondary analysis of a survey of nurses)	A 9-page survey designed to collect information on patient workload, quality of care, work environment, and other nursing care features (Sochalski et al., 1999; Aiken et al., 2001)	Descriptive statistics Bivariate correlation Multivariate regression analysis	–	–
Yen and Lo, 2004, Taiwan	n=755 surgical patients	–	Descriptive correlational design	The Patient Assessment of Hospital Care (PAHC, Picker Institute, 1988)	Descriptive statistics Bivariate correlations	0.70–0.93	Construct validity Content validity Factor analysis
Leinonen et al., 2003, Finland	n=874 surgical patients	n=143 perioperative nurses	Descriptive comparative design	Good Nursing Care Scale (GNCS-P, GNCS-N, Leino-Kilpi, 1990; Leino-Kilpi and Vuorenheimo, 1994, modified)	Descriptive statistics Wilcoxon two-sample test Spearman correlation	0.14–0.86 (patients) 0.50–0.84 (nurses)	Content validity
Loan et al., 2003, USA	n=872 (adult inpatient records) n=372 (responses to patient satisfaction surveys) medical-surgical patients	daily nursing data during 3 months (102 days)	Descriptive design	Staffing data: Form of 24-hour nursing report Patient data: Inpatient records; Pre-existing institutional form used to track falls; Infection control records; Patient Satisfaction with Nursing Care Questionnaire (PSNCQ)s	ANA indicators' evaluation Descriptive statistics	0.87	–
Aiken et al., 2002, USA	Patient discharge data	n=10 319 nurses	Descriptive multisite cross-sectional design	Organizational Support Subscale Job satisfaction, Maslach Burnout Inventory (Maslach, 1986) Items related to quality of care	Logistic regression Descriptive statistics	– –	Predictive validity
Cuñado et al., 2002, Spain	n=96 medical-surgical patients	–	Transverse observational design	Consumer Emergency Care Satisfaction Scale (CECSS, Davis and Bush, 1995) (5-point scale) Delighted-Upset Faces Scale (Bowling, 1991) Hospital Anxiety and Depression Scale (HAD) Questionnaire developed for current study	Descriptive statistics Factor analysis Pearson correlation	0.88 – –	Content validity Construction validity Convergent construction validity Factor analysis
Meraviglia et al., 2002, USA	n=723 medical-surgical patients	nursing records data from 4 units	Descriptive correlational design	Clinical indicator data (maintenance of skin integrity, pressure ulcer ratio, skin integrity ratio, pressure ulcer since admission ratio, falls and injury, nosocomial ratio) Patient satisfaction included: pain management, overall hospital care, nursing care, education, trusting relationship, technical skills	Descriptive and correlational statistics Benchmarking of the results	– –	–
Larrabee et al., 2001, USA	n=199 medical-surgical patients	–	Descriptive qualitative design	Interview within 48 hours prior to hospital discharge, question for patients, "What is good nursing care?"	Inductive content analysis	–	–

Table 1. Characteristics of Studies (continuation)

1	2	3	4	5	6	7	8
Lynn and Bradley, 1999, USA	n=448 medical-surgical patients	n=350 nurses	Descriptive design	Patients' Perception of Quality Scale-Acute Care Version (PAQS-ACV), 90 items Interview with patients, question, "How would you describe or define good nursing care?"	Descriptive statistics Mann-Whitney <i>U</i> tests	0.85	Content validity
Al-Kandari and Ogundeyin, 1998, Kuwait	n=148 medical-surgical patients	n=109 nurses	Descriptive design	Questionnaire designed for current study included: assessment, planning, diagnosis, implementation and evaluation of nursing care	Descriptive and inferential statistics <i>t</i> test	–	Construct validity
Leinonen et al., 1996, Finland	n=246 surgical patients	–	Descriptive design	Modified Good Nursing Care Scale (GNCS-P) Leino-Kilpi, 1990; Leino-Kilpi and Vuorenheimo, 1992, 1994) (VAS 100 mm long)	Descriptive statistics Wilcoxon two-sample test Spearman correlation Kruskal-Wallis and Mann-Whitney <i>U</i> tests	0.47-0.83	Factor analysis

## Results

### *Methodological Characteristics of the Studies*

**Aims of the Studies.** The aims of the studies included were classified by their content analysis into the main 5 categories (Table 2). The most common aim of studies was to analyze the quality of nursing care in association with patient outcomes (28–34). Other studies aimed to describe the quality of nursing care from patients' or/and nurses' perspective and/or to compare their perceptions (11, 16, 19, 35–37). The studies aiming to develop specific instruments for the evaluation of the quality of care (18, 38) or to develop and evaluate the special preceptorship programs (39) as well as studies focusing on the measurement of quality indicators were analyzed (40).

**Study Design.** Frequently, a nonexperimental design was used by authors in their studies (Table 1). One study was carried out by using a quasi-experimental design (39); all other used a descriptive design (41). A secondary analysis of the data, which were collected earlier, was carried out in two studies (31, 34). Three studies were carried out by using a cross-sectional design (28, 32, 33). The descriptive correlational design was used in two studies (30, 40) as well as comparative design in five studies (16, 19, 31, 32, 34).

**Sample.** The analyzed studies enrolled patients and nurses (Table 1). A total of 6836 patients were involved in 12 studies (mean, 570; range, 96–1470); the total sample of nurses from 11 studies was 32 011 (mean, 2910; range, 24–10 319). The study population comprised both nurses and patients in 7 studies (16, 18, 19, 32, 36, 37, 40). The sample of patients

comprised medical-surgical patients including patients after abdominal surgery. The staff nurses were recruited in 11 studies with nurse managers in two of them. The authors also explored inpatient medical records and daily staffing data (29, 40).

**Instruments.** Various instruments were employed to measure the quality of nursing care in the studies (Table 1). In this review, the instruments can be classified by three criteria: 1) patient perceptions of the quality of nursing care were evaluated using the scales measuring patient satisfaction; 2) scales based on the conceptualization of care quality from nurses' perspectives; and 3) scales developed with some patient input. A structured questionnaire, developed earlier and modified for a particular study, as an instrument was frequently used (n=13). More than one questionnaire was used in 10 studies. The instruments developed for that particular study were applied in 9 studies (n=9). Interview (n=1) and medical records (n=1) were other data collection methods used in the studies. The indicators of nursing care quality, developed by the American Nurses Association, were evaluated in two studies. Some instruments for the measurement of the quality of nursing care were used more than in one study: the Good Nursing Care Scale (GNCS, Leino-Kilpi, 1990; Leino-Kilpi and Vuorenheimo, 1994 [9, 42]) was used in three studies; Patient's Assessment of Quality Scale – Acute Care Version (PAQS-ACV, Lynn and McMillen, 1999 [37]) was used in three studies as well; and the Maslach Burnout Inventory (Maslach, 1986) as an additional instrument was used in two studies.

**Data Analysis.** Data analysis (Table 1) included

Table 2. Aims of Included Studies (n=17)

Classification of Purposes (N=17)	Purpose of Studies	Reference
Analysis the quality of nursing care in connection with outcomes (n=7): Nurse staffing Nurse job satisfaction Patient satisfaction Patient outcomes	To examine the effects of nurse staffing and organizational support for nursing care on nurses' dissatisfaction with their job, nurse burnout, and nurse reports of quality of patient care	Aiken et al., 2002
	To determine the relationship between nurse staffing and quality care from patients' viewpoint	Loan et al., 2003
	To determine the relationship between nurse staffing and quality care from nurses' viewpoint	Sochalski, 2004; Cho et al., 2009
	To study nurses' job satisfaction, patients' satisfaction and quality of nursing care	Mrayyan, 2006
	To investigate patient outcomes in relation to selected patient characteristics, patient care processes of perceived nursing care quality, and coordination of care	Yen and Lo, 2004
	To describe nurses' reports of unmet nursing care needs and examine the variation of nursing care quality	Lucero et al., 2009
Description of the quality of nursing care from patients' and/or nurses' viewpoint (n=6)	To measure the quality of nursing care from patients' perspective	Leinonen et al., 1996; Larrabee and Bolden, 2001
	To measure and compare the perceptions of the quality of nursing care from patients' and nurses' perspectives	Al-Kandari and Ogundeyin, 1998; Lynn et al., 1999; Leinonen et al., 2003; Zhao et al., 2008
Development of instruments for measuring the quality of nursing care (n=2)	To develop a specific instrument to measure patient-perceived quality of nursing care	Cuñado et al., 2002; Lynn et al., 2007
Development of preceptorship program (n=1)	To design a preceptorship program and to evaluate its effect on turnover rate, turnover cost, quality of care and professional development	Lee et al., 2009
Measurement of the quality of nursing care based on clinical indicators (n=1)	To measure the quality of nursing care based on the quality indicators such as maintenance of skin integrity	Meraviglia et al., 2002

descriptive statistics (n=16), correlational analysis (n=11), and combinations of more than 2 statistical data analysis methods (n=9). The inductive content analysis was conducted as well (11). The reliability and validity of instruments were evaluated in the studies (n=13) by using the Cronbach alpha coefficient, validity methods, and content validity index (CVI).

### **Main Findings of the Studies**

**Definitions of the Quality of Abdominal Surgical Nursing Care.** The quality of nursing care was defined in the studies as a complex and multidimensional concept; however, it varied depending on the context of study (Table 3). Clear definitions of the quality of nursing care were presented in a few articles. The theoretical framework of structure-process-outcome proposed by Donabedian (8) and theoretical framework presented in the earlier work by Leino-Kilpi (42) and Leino-Kilpi and Vuorenheimo (9) were most frequently used to measure the quality of nursing care in the analyzed studies. Some authors applied the models for defining the quality of nursing care, developed by authors themselves (11, 28, 34, 37). Definitions of the quality of nursing care

from nurses' and patients' perspectives may be different as their perceptions of quality differ (16, 19). However, the findings from the study by Al-Kandari and Ogundeyin (36) showed that the quality of nursing was similarly evaluated by both patients and nurses. Different components of the quality of nursing care are identified: 1) environment (16, 18, 19, 30, 34, 35, 37); 2) individualized care of a patient (11, 16, 18, 19, 28-30, 34, 35, 37-40); 3) patient safety (29, 31, 39, 40); 4) process of care (16, 18, 19, 30, 31, 34-36); 5) characteristics of nurses (11, 16, 18, 19, 28, 35, 37, 38); 6) cooperation with relatives (19, 30); and 7) nursing activities (16, 19, 30, 32, 35).

**Level of the Quality of Nursing Care.** The quality of nursing care, evaluating it from patients' and/or nurses' viewpoint, was rated as high in 11 studies (Table 3). However, in the study by Aiken et al. (28), the quality of nursing care was assessed as fair/poor by one-third of nurses, and 40% of them reported that the quality of care in their hospital deteriorated during the past year. Furthermore, nurses were more critical in the assessment of the quality than patients (16, 37), but not in the study by Zhao et al. (19) and Al-Kandari and Ogundeyin (36).



Table 3. The Main Findings of Studies

Reference	Theoretical Framework and / or Definition of Quality	Quality Category/ Indicator	Level of Quality of Nursing Care	Factor Associated With Quality of Nursing Care	Positive (+)/ Negative (-) Relationship
1	2	3	4	5	6
Cho et al., 2009	Not presented	Nurse staffing	57% of nurses rated level of quality as high Level is high when ICU nurses take care of 1–2.5 patients	Organizational characteristics (hospital characteristics, ICU characteristics) Nurse staffing (average number of patients per nurse) Nurse characteristics (position, work experience, and marital status)	+ + +
Lee et al., 2009	Not presented	Medication error rates Patient falling rates Incident rates Patient satisfaction Nurse job satisfaction	Not measured	Preceptorship program for new nurses	+
Lucero et al., 2009	Process of care and outcomes model	Care environment Patient factors Process of care Outcomes	The level indicator is Registered Nurses' reports of unmet nursing care needs	Nursing care needs left unmet Nurse staffing (average number of patients per nurse)	- +
Zhao et al., 2008	Leino-Kilpi and Vuorenheimo (1994)	Physical environment Psychological aspects of care Professionalism of nurses Staff characteristics Care-related activities Preconditions for care Progress of nursing process Cooperation with relatives	Level measured by both patients' and nurses' perceptions is high (range of mean, 4.09–4.42; min, 1; max, 5)	Not presented	
Lynn et al., 2007	Swanson-Kauffman (1988)	Individualization of care Nurse characteristics Caring Environment Responsiveness	Not measured	Patient perceived health status Patient compliance with patient prescribed orders	+ +
Mrayyan, 2006	Grujic et al. (1989)	Having enough time to complete assignments Availability of nurses to assist physicians Having enough time to carry out orders for medications and treatments on time Having time to keep supplies and equipment in good condition	The mean total quality of nursing care was 3.68 (SD, 0.45)	Nurse job satisfaction Patient satisfaction	+ +
Sochalski, 2004	Donabedian (1966)	Process of care Patient outcomes	26% of nurses reported the quality of nursing care to be excellent and 54% good, 20% reported it to be fair or poor	Nurse staffing (patient workload) Patient safety problems (medication errors and patient falls with injuries) Nursing care needs (number of nursing tasks)	+ - -
Yen and Lo, 2004	Donabedian's (1966) framework as the foundation for Model of Significant Paths Coefficients for Perceived Nursing Care Quality on Patient Outcomes and Length of Hospital Stay	Respect of patients' values, preferences, and expressed needs Coordination, integration, and information flow Information and education Physical comfort Emotional support and alleviation of fear and anxiety Involvement of family and friends Transition and continuity Overall patient satisfaction	Not measured	Age of patient Patient income Education of patient Patient comfort Patient satisfaction	+ - + + +

Table 3. The Main Findings of Studies (continuation)

1	2	3	4	5	6
Leinonen et al., 2003	Leino-Kilpi (1990), Leino-Kilpi and Vuorenheimo (1994)	Staff characteristics Nursing activities Preconditions Progress of nursing process Environment	Patients (range, 3.70–4.85; min, 1; max, 5) rated the quality higher than nurses (range, 3.13–4.27; min, 1; max, 5), but both groups evaluated as high	Not presented	
Loan et al., 2003	Nursing Quality Report Card (1994) designed by American Nurses' Association	Staff mix Total nursing care hours provided per patient day Skin integrity Nosocomial infections Patient injury Patient satisfaction (satisfaction with care, nursing care, education, and pain management)	Not measured	Nurse staffing (average number of patients per nurse) Documentation (medical records) Proportion of nursing staff members	+ + +
Aiken et al., 2002	Conceptual model of the mechanisms by which organizational features of hospitals affect patient and nurse outcomes	General quality of nursing care on unit Quality of nursing care on the last shift Quality improving Confidence of patient	About 20% of nurses rated the quality of care on unit as fair/poor, 30% rated the quality on the last shift as fair/poor, 40% reported that the quality of care has deteriorated over the past year	Nurse staffing Organizational support for nursing practice Nurse job satisfaction and burn-out	+ + +
Cuñado et al., 2002	Not presented	Patient satisfaction (professional competence of nurse; information on discharge)	The level of quality assessed by patients is high (range of SD=0.7–2.1), 19 items	Patient opinion about the received nursing care (Delighted-Upset Faces Scale) Clinical evolution of the problem for which the patient went to the emergency (a formulated question)	– –
Meraviglia et al., 2002	Nursing Quality Report Card (1994) designed by American Nurses' Association	Maintenance of skin integrity A pressure ulcer ratio A nosocomial ratio A falls and injury ratio Patient satisfaction (pain management, overall hospital care, nursing care, education, trusting relationship, technical skills) Nurse satisfaction	Not measured	Documentation of risk of pressure ulcer, nosocomial infection, falls and injury Risk assessment of pressure ulcer, nosocomial infection, falls and injury Nurse staffing (average number of patients per nurse) Proportion of nursing staff members Number of beds	+ – + + +
Larrabee and Bolden, 2001	Larrabee (1996)	Patient satisfaction (providing for patient needs, treating patient pleasantly, caring about patient, being competent, providing prompt care)	Not measured	Not measured	
Lynn and Bradley, 1999	Agreement between nurses and patients on the importance of various elements of quality nursing care	Physical environment Psychological aspects of care Professionalism of nurses	Patients rated the elements of nursing care higher than nurses	Patient expectations of the nursing care	+
Al-Kandari and Ogundeyin, 1998	Quality nursing care is care rendered to patients in a hospital unit based on the appropriate use of the nursing process	Assessment of nursing care Planning of nursing care Diagnosis of nursing care Implementation of nursing care Evaluation of nursing care	Patients and nurses evaluated the quality of nursing care as high	Hospital level Nurse work experience Patient expectations of the nursing care	+ + +



Table 3. The Main Findings of Studies (continuation)

1	2	3	4	5	6
Leinonen et al., 1996	Leino-Kilpi (1990), Leino-Kilpi and Vuorenheimo (1992, 1994)	Biological-physiological perspective Experiential perspective Cognitive perspective Functional perspective Ethical perspective Characteristics and competencies of nursing professionals Environmental perspective	Patients were satisfied with their nursing care (high level)	Age of patients Time and amount of information given to patient Type of anesthesia Time of operation (morning or afternoon) Patient knowledge about the operation	+ + +/- +/- +/-

*Factors Associated with the Quality of Nursing Care.* Several factors were found to be associated with the quality of nursing care (Table 3). The associations between the quality of nursing care and the following factors were reported to be positive or/and negative: 1) nurse staffing (28, 29, 31, 33, 34, 40); 2) organizational characteristics (28, 33, 36); 3) characteristics of patients (18, 30, 32, 35–38); 4) characteristics of nurses (28, 32, 36, 39); 5) nursing care needs (31, 34); and 6) nursing documentation (29, 40).

### Discussion

The research in the area of the quality of abdominal surgical nursing care is limited. There are no studies with a special focus on the quality of abdominal surgical nursing care as well as literature reviews. It is a new scoping review in the field of the quality of medical-surgical nursing care with the focus on the quality of abdominal surgical nursing care. The findings may be useful for nursing research, nursing education, and nursing practice with implications for nursing management.

*Methodological Characteristics of the Studies.* The studies included in this review analyzed different aspects of the quality of nursing care involving patients who undergo abdominal surgery, but no studies investigating characteristic features of the quality of abdominal surgical nursing care were found. Various methods for quality measurement were used in studies such as Leinonen et al. (43), and sometimes not all methodological issues were clear for identification and synthesis.

The quality of nursing care in the analyzed studies was evaluated from patients' and/or nurses' perspectives. Patients are frequently chosen as participants probably because of the importance of their opinion and the interrelationship between patient satisfaction with health care and treatment outcome as mentioned in earlier studies (10, 19, 38, 43, 44). Gunther and Alligood (14) proposed that the nursing profession has been unable to articulate clearly what comprises high-quality nursing care because we have been defining it as a product viewed from the patient's perspective rather than a service offered by the profession.

There are no instruments developed and psychometrically assessed for the measurement of the quality of abdominal surgical nursing care. However, the combination of some instruments could be useful for the measurements of the quality of nursing care in this area (43) including cognitive/technical and affective/interpersonal aspects of nursing quality (22). According to Radwin et al. (21), the instruments for the measurement of the quality of nursing care could be classified by three criteria: patients' perceptions of the quality of nursing care were measured using patient satisfaction scales (29, 39, 40), scales based on the conceptualization of care quality from nurses' perspectives, and scales developed with some patient input (16, 18, 32, 37). The evaluation of the quality of abdominal surgical nursing care requires high-quality instruments, preferably with some interventions in order to have a broader view of quality. The statistical data analysis, carried out almost in all studies, provides the capability to process large samples as easy as small ones, especially when questionnaires are used. Nurse researchers have applied the newest statistical data analysis methods and presented the reliability and validity of used tools.

*Main Findings of the Studies.* The evaluation of the quality of health care from three aspects – structure, process, and outcomes – suggested by Donabedian (8) is still helpful to define the quality. However, the Donabedian's model focuses on health care, not nursing care; his definition of the quality of care that individual practitioners provide care to individual patients was useful in defining the quality of nursing care at individual versus organizational level (22). Patient outcome is more preferable in the studies on nursing quality from patients' perspectives usually based on patient satisfaction with nursing care, although nursing processes and activities are the key elements in the studies evaluating nursing quality from nurses' perspectives (14). The components of quality such as environment, individualized care of a patient, patient safety (45), and cooperation with relatives are important for defining the quality of nursing care from both patients' and nurses' perspectives. The definition of the quality

of nursing care is not constant and tends to change depending on many factors such as time, place, perspective, etc. The meaning of quality as it pertains to nursing remains elusive because the frameworks used to define the concept and develop theories emerge from the perspective of people other than those in the nursing profession (14).

There is a lack of studies that measured the level of the quality of abdominal surgical nursing care. However, it is becoming more and more important to ensure and maintain a high level of quality in nursing care as economic pressure is increasing and personnel is being reduced, and the need for the assessment of the quality of nursing in abdominal surgical area is obvious. Usually, patient-oriented nursing care is associated with high-quality nursing care (46). However, the quality of nursing care cannot be evaluated only from patients' perspective as mentioned previously (14–17, 19); nurses must be involved in this process. High-quality nursing care entails the use of nursing knowledge, and nursing knowledge resides in the discipline's published conceptual models and theories (14).

There is a need to explore the factors that may influence the quality of abdominal surgical nursing care. Patients' variables such as age, gender, education, marital status, previous experience of surgery, etc. should be taken into consideration. For example, younger patients tend to be more critical in their evaluation probably because of higher levels of knowledge and less practical experience. It is critically important that surgical nurses would be able to identify patients' informational needs and find ways to meet these needs especially with the aging population, new/advanced surgical procedures, vulnerability/poverty, and literacy level of patients (47). Nurse managers and educators should pay attention to the relationship between the quality of abdominal surgical nursing care and nurse staffing, nursing documentation, and unmet nursing care needs. Several studies (29, 32, 34) have shown that a nurse who has enough time to take care of a patient, to complete the adequate documentation, and to perform other activities such as an update of nursing care plans, teaching of patients and family, which are important, but usually left unfinished because of lack of time, can provide high-quality nursing care.

*Limitations.* The search of articles was limited because of the electronic access only to the latest publications. It is possible that several relevant studies published earlier in paper format were left inaccessible and were not included in this scoping review. The literature review encompassed the references

selected by searching in four databases using the explode commands; therefore, not all relevant studies were included in this review. However, the chosen databases are most comprehensive and useful for nurse researchers as mentioned previously (23–25). The description of the quality of nursing care in this review is oriented to specific aspects of abdominal surgery; however, as empirical research on this topic is limited, the quality of nursing care is described in general as it was reported in studies. Inductive content analysis provides a broad picture of the content of the studies, although the used methods do not necessarily capture all possible contents and details.

*Future Directions of Research.* Future research in the area of abdominal surgical nursing care needs to provide more information on the quality of nursing care. In particular, more information on the effectiveness of methods to evaluate and improve the quality of abdominal nursing care and the establishment of the roles of nurses, patients and their relatives in this process is needed. The quality of abdominal surgical nursing care should be systematically and constantly evaluated, measured, and monitored from patients' and nurses' perspectives by using various methods and complex interventions.

## Conclusions

Many references dealing with the quality of nursing care were found. However, there is a lack of studies that aimed to highlight specific aspects of the quality of abdominal surgical nursing care. The quality of abdominal surgical nursing care is an important aspect for nursing theory and practice development, patients' satisfaction, and nurses' job satisfaction as well as for nurse managers/administrators and other health care providers who are interested in improving the quality of health care and economic situation.

Nursing educators should include the subjects, reflecting characteristic features of abdominal surgical nursing care, in nursing programs in order to improve the quality of nursing care and nurse competence. Further research on nursing should be focused on the measurement and evaluation of the quality of abdominal surgical nursing care from nurses', patients' and their relatives' perspectives by using nonexperimental and experimental study designs for gaining the knowledge how to improve the quality and what economic, social, and well-being benefit may be obtained.

## Statement of Conflict of Interest

The authors state no conflict of interest.

## Abdominalinės chirurginės slaugos srities tyrinėjimai: literatūros apžvalga

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**Raktažodžiai:** slaugos kokybė, chirurginė priežiūra, abdominalinė priežiūra, literatūros apžvalga.

**Santrauka.** Per keletą metų atrasta daug įvairių sveikatos priežiūros kokybės matavimo indikatorių. Tačiau trūksta slaugos kokybės rodiklių vertinimų. Galima daryti prielaidą, kad ligoniniai po pilvo operacijų gali būti grupė pacientų, kurie turi skirtingą požiūrį, poreikius, lūkesčius ir slaugos kokybės vertinimus. Literatūros paieška buvo atlikta duomenų bazėse „MEDLINE“, „PsycInfo“, „CINAHL“ ir „Cochrane“ pagal paieškos žodžius ir jų derinius: *slaugos kokybė, chirurginis arba perioperacinis, abdominalinis arba pilvo*. Straipsniai, nagrinėjantys chirurginės slaugos kokybę, kur tiriamųjų kontingentas yra pacientai po pilvo operacijų ir jų slaugytojai, buvo atrinkti šiai literatūros apžvalgai. Išanalizuota 17 tiriamųjų straipsnių. Atlikus apžvalgą, nustatyta, kad pacientai ir slaugytojai dažnai labai gerai vertina slaugos kokybę. Taip pat nustatyti veiksniai, susiję su slaugos kokybe: slaugos personalo charakteristikos, medicinos įstaigų charakteristikos, pacientų charakteristikos, slaugytojų asmeninės charakteristikos, slaugos poreikiai bei slaugos dokumentacija. Šios srities tyrinėjimai turėtų būti nukreipti į slaugos kokybės matavimą slaugytojų, pacientų ir jų artimųjų požiūriu, taikant įvairius tyrimo metodus. Tyrinėjimų tikslas – gauti naujų taikomųjų žinių apie slaugos kokybės gerinimą.

### References

- DeFrances CJ, Lucas CA, Buie VC, Golosinskiy A. National Health Statistics Reports. 2006 National Hospital Discharge Survey. US Department of Health and Human Services. No. 5, July 30, 2008. Available from: URL: <http://www.cdc.gov/nchs/data/nhsr/nhsr005.pdf>
- Organisation for Economic Co-operation and Development. OECD Health Data, 2010.
- National Center for Health Statistics of USA. US Department of Health and Human Services, 2008. (cited 2010 August 8). Available from: URL: <http://www.cdc.gov/nchs/fastats/insurg.htm>
- Lithuanian Health Statistics. Health Information Centre of Institute of Hygiene. Surgical operations at inpatients' hospitals, 2009. (cited 2010 August 8). Available from: URL: [http://www.lsic.lt/php/spiv7.php?dat\\_file=spiv7.txt](http://www.lsic.lt/php/spiv7.php?dat_file=spiv7.txt)
- Morris DB, Wilson KG, Clinch JJ, Ammerman DJ, Ferguson D, Graham ID, et al. Identification of domains relevant to health-related quality of life in patients undergoing major surgery. *Qual Life Res* 2006;15(5):841-54.
- Newhouse RP, Johantgen M, Pronovost PJ, Johnson E. Perioperative nurses and patient outcomes – mortality, complications, and length of stay. *AORN J* 2005;81(3):508-9, 513-6, 518.
- Hall LW, Moore SM, Barnsteiner JH. Quality and nursing: moving from a concept to a core competency. *Urol Nurs* 2008;28(6):417-25.
- Donabedian A. Evaluating the quality of medical care. 1966. *Milbank Q* 2005;83(4):691-729.
- 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.
- Oermann MH, Templin T. Important attributes of quality health care: consumer perspectives. *J Nurs Scholarship* 2000;32(2):167-72.
- Larrabee JH, Bolden LV. Defining patient-perceived quality of nursing care. *J Nurs Care Qual* 2001;16(1):34-60.
- Institute of Medicine. Crossing the quality chasm: a new health system for the 21st century. Washington (DC): National Academy Press; 2001. Available from: URL: [http://books.nap.edu/openbook.php?record\\_id=10027](http://books.nap.edu/openbook.php?record_id=10027)
- Grujic SD, O'Sullivan DD, Wehrmacher WH. Organizational control of hospital infrastructure determines the quality of care. *Qual Assur Util Rev* 1989;4(1):19-24.
- Gunther M., Alligood MR. A discipline-specific determination of high quality nursing care. *J Adv Nurs* 2002;38(4):353-9.
- 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.
- 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.
- 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.
- Lynn MR, McMillen BJ, Sidani S. Understanding and measuring patients' assessment of the quality of nursing care. *Nurs Res* 2007;56(3):159-66.
- 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.
- American Nurses Association. National database of nursing quality indicators: Guidelines for data collection and submission on quarterly indicators. Kansas City: American Nurses Publishing; 2005.
- Radwin L, Alster K, Rubin KM. Development and testing of the Oncology Patients' Perceptions of the Quality of Nursing Care Scale. *Oncol Nurs Forum* 2003;30(2):283-90.
- Izumi S, Baggs J, Knafel KA. Quality nursing care for hospitalized patients with advanced illness: concept development. *Res Nurs Health* 2010;33(4):299-315.
- Evans D. Systematic reviews of nursing research. *Intensive Crit Care Nurs* 2001;17(1):51-7.
- Subirana M, Sola I, Garcia JM, Gich I, Urrutia G. A nursing qualitative systematic review required MEDLINE and CINAHL for study identification. *J Clin Epidemiol* 2005;58(1):20-5.
- Flemming K, Briggs M. Electronic searching to locate qualitative research: evaluation of three strategies. *J Adv Nurs* 2006;57(1):95-100.

26. Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *Int J Soc Res Methodol* 2005;8(1):19-32.
27. Davis K, Drey N, Gould D. What are scoping studies? A review of the nursing literature. *Int J Nurs Stud* 2009; (46):1386-400.
28. Aiken LH, Clarke SP, Sloane DM. Hospital staffing, organization, and quality of care: cross-national findings. *Nurs Outlook* 2002;50:187-94.
29. Loan LA, Jennings BM, Brosch LR, DePaul D, Hildreth P. Indicators of nursing care quality. Findings from a pilot study. *Outcomes Manag* 2003;7(2):51-8.
30. Yen M, Lo LH. A model for testing the relationship of nursing care and patient outcomes. *Nurs Econ* 2004;22(2): 75-80.
31. 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.
32. Mrayyan MT. Jordanian nurses' job satisfaction, patients' satisfaction and quality of nursing care. *Int Nurs Rev* 2006;53:224-30.
33. Cho SH, June KJ, Kim YM, Cho YA, Yoo CS, Yun SC, et al. Nurse staffing, quality of nursing care and nurse job outcomes in intensive care units. *J Clin Nurs* 2009;18(12): 1729-37.
34. Lucero RJ, Eileen TL, Aiken L. Variations in nursing care quality across hospitals. *J Adv Nurs* 2009;65(11):2299-310.
35. Leinonen T, Leino-Kilpi H. The quality of intraoperative nursing care: the patient's perspective. *J Adv Nurs* 1996; 24:843-852.
36. Al-Kandari F, Ogundeyin W. Patients' and nurses' perceptions of the quality of nursing care in Kuwait. *J Adv Nurs* 1998;27:914-21.
37. Lynn MR, McMillen BJ. Do nurses know what patients think is important in nursing care? *J Nurs Care Qual* 1999;13(5):65-74.
38. Cuñado BA, García CB, Rial CC, García LF. Spanish validation of an instrument to measure the quality of nursing care in hospital emergency units. *J Nurs Care Qual* 2002; 16(3):13-23.
39. Lee TY, Tzeng WC, Lin CH, Yeh ML. Effects of a preceptorship programme on turnover rate, cost, quality and professional development. *J Clin Nurs* 2009;18:1217-25.
40. Meraviglia M, Becker H, Grobe SJ, King M. Maintenance of skin integrity as a clinical indicator of nursing care. *Adv Skin Wound Care* 2002;15(1):24-9.
41. Polit DF, Hungler BP. *Nursing research. Principles and methods*. 6th ed. Philadelphia: Lippincott; 1999.
42. Leino-Kilpi H. *Good nursing care. On what basis?* (dissertation). Turku: Turun Yliopisto; 1990.
43. Leinonen T, Leino-Kilpi H. Research in peri-operative nursing care. *J Clin Nurs* 1999;8:123-38.
44. O'Connell B, Young J, Twigg D. Patient satisfaction with nursing care: a measurement conundrum. *Int J Nurs Pract* 1999;5:72-7.
45. Swan BA, Boruch RF. Quality of evidence. Usefulness in measuring the quality of health care. *Med Care* 2004 Feb;42(2 Suppl):II12-20.
46. Anthony MK, Hudson-Barr D. A patient-centered model of care for hospital discharge. *Clin Nurs Res* 2004;13(2): 117-36.
47. Pieper B, Sieggreen M, Freeland B, Kulwicki P, Frattaroli M, Sidor D, et al. Discharge information needs of patients after surgery. *J Wound Ostomy Continence Nurs* 2006; 33(3):281-9.

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