

MANAGEMENT DECISION MAKING IN HOSPITAL NURSING: FROM THEORETICAL KNOWLEDGE TO PRACTICAL APPLICATION**TOMA DE DECISIONES GERENCIALES EN ENFERMERÍA HOSPITALARIA: DEL CONOCIMIENTO TEÓRICO A LA APLICACIÓN PRÁCTICA****TOMADA DE DECISÃO GERENCIAL NA ENFERMAGEM HOSPITALAR: DO CONHECIMENTO TEÓRICO À APLICAÇÃO PRÁTICA**

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ABSTRACT

Introduction: Decision-making is an essential competency in hospital nursing management, with a direct impact on the quality of care. **Objective:** To assess nurses' knowledge of the managerial decision-making process and how they apply it in their daily professional practice. **Method:** An exploratory, quantitative study was conducted at a private university hospital in São Paulo. The participants were 181 nurses (32 in administrative roles and 149 in clinical roles), who completed a questionnaire with sociodemographic data and 14 statements about the decision-making process, rated on a Likert scale. **Results:** Most participants demonstrated theoretical knowledge on the subject but did not apply structured models in practice. Decisions were primarily based on personal routines. Factor analysis identified three domains: theoretical aspects, subjective aspects, and qualities of the decision-maker. The instrument showed satisfactory internal consistency (Cronbach's $\alpha = 0.81$). **Conclusion:** Despite recognizing the importance of decision-making as a managerial competency, nurses do not consistently adopt systematic, evidence-based approaches, revealing a significant gap between knowledge and practice. This study highlights the need for institutional strategies that promote continuous professional development, the use of decision support technologies, and the adoption of contemporary management models in hospital nursing.

Keywords: Nursing; Hospital Nursing Service; Professional Competence; Decision Making.

RESUMO

Introdução: A tomada de decisão é uma competência essencial à prática gerencial da Enfermagem hospitalar, com impacto direto na qualidade do cuidado. **Objetivo:** Avaliar o conhecimento de enfermeiros sobre o processo de tomada de decisão gerencial e como o aplicam no cotidiano profissional. **Método:** Estudo exploratório, de abordagem quantitativa, realizado em um hospital universitário privado em São Paulo. Participaram 181 enfermeiros (32 administrativos e 149 assistenciais), que responderam a um questionário com dados sociodemográficos e 14 afirmativas sobre o processo de tomada de decisão, em escala de Likert. **Resultados:** A maioria demonstrou conhecimento teórico sobre o tema, mas sem aplicação de modelos estruturados. As decisões foram majoritariamente baseadas em rotinas pessoais. A análise fatorial identificou três domínios: aspectos teóricos, subjetivos e qualidades dos tomadores de decisão. O instrumento apresentou consistência interna satisfatória ($\alpha = 0,81$). **Conclusão:** Apesar do reconhecimento da importância da tomada de decisão como competência gerencial, os enfermeiros não adotam abordagens sistematizadas e baseadas em evidências, o que revela lacunas entre conhecimento e prática. Destaca-se a necessidade de estratégias institucionais que promovam a capacitação contínua, o uso de tecnologias de apoio à decisão e a adoção de modelos contemporâneos de gestão na enfermagem hospitalar.

Palavras-chave: Enfermagem; Serviço Hospitalar de Enfermagem; Competência Profissional; Tomada de Decisão.

RESUMEN

Introducción: La toma de decisiones es una habilidad esencial en la práctica de gestión de la enfermería hospitalaria, con un impacto directo en la calidad de la atención. **Objetivo:** Evaluar el conocimiento de las enfermeras sobre el proceso de toma de decisiones gerenciales y cómo lo aplican en su vida profesional diaria. **Método:** Estudio exploratorio, con abordaje cuantitativo, realizado en un hospital universitario privado de São Paulo. Participaron 181 enfermeras (32 administrativas y 149 asistenciales), quienes respondieron un cuestionario con datos sociodemográficos y 14 afirmaciones sobre el proceso de toma de decisiones, en escala Likert. **Resultados:** La mayoría demostró conocimientos teóricos sobre el tema, pero sin aplicar modelos estructurados. Las decisiones se basaron en gran medida en rutinas personales. El análisis factorial identificó tres dominios: aspectos teóricos y subjetivos y cualidades de los tomadores de decisiones. El instrumento mostró una consistencia interna satisfactoria ($\alpha = 0,81$). **Conclusión:** A pesar de reconocer la importancia de la toma de decisiones como habilidad de gestión, las enfermeras no adoptan enfoques sistemáticos y basados en evidencia, lo que revela brechas entre el conocimiento y la práctica. Se destaca la necesidad de estrategias institucionales que promuevan la formación continua, el uso de tecnologías de apoyo a la decisión y la adopción de modelos contemporáneos de gestión en enfermería hospitalaria.

Palabras clave: Enfermería; Servicio de Enfermería Hospitalaria; Competencia Profesional; Toma de Decisiones.



INTRODUÇÃO

Effective decision-making in high-pressure hospital nursing environments is influenced by a combination of individual, organizational, and situational factors. These elements are crucial for nurses to make timely and accurate decisions, ensuring patient safety and the quality of care. In the hospital context, decision-making involves not only resolving clinical problems but also organizing workflows, managing resources, and ensuring the efficiency of services provided⁽¹⁻⁴⁾.

Among individual factors, experience and continuous education are key determinants of efficient decision-making. Nurses with greater professional experience and specialized training tend to handle high-pressure situations more effectively, using strategies based on pattern recognition. This allows for rapid decisions grounded in previous experiences and the identification of similar scenarios⁽¹⁾. Furthermore, the ability to manage stress and maintain emotional control is essential, as high levels of tension can compromise the decision-making process and increase the likelihood of errors⁽²⁾.

At the organizational level, team dynamics and effective communication play a crucial role in patient safety. Structured training in collaboration and stress management can enhance collective decision-making and minimize the occurrence of failures⁽³⁾. Additionally, heavy workloads and time pressure pose significant challenges, as nurses must often make quick decisions with limited information, thereby increasing the risk of mistakes⁽²⁾.

Situational factors also directly influence the decision-making process. The hospital environment, characterized by uncertainty and high complexity, requires nurses to adapt quickly to change and make effective decisions in unpredictable scenarios. In response to this reality, the healthcare market seeks qualified professionals who combine manual dexterity with advanced technical and cognitive competencies, demonstrating an ability to cope with the accelerated pace of change in the modern workplace⁽⁵⁻⁶⁾. To achieve this, a balance between analytical and intuitive strategies is essential⁽¹⁻²⁾. One approach that has been widely studied to enhance decision-making is simulation-based training. This method provides nurses with the opportunity to experience realistic scenarios that stimulate critical thinking and reflection on their decisions⁽⁴⁾.

Managerial decision-making is an essential competency for nurses, especially in the hospital setting, where their choices directly impact the quality of care. Despite the recognition of this competency's importance, many decisions are still based on personal routines or individual experiences rather than on structured, evidence-based models. This gap between theoretical knowledge and clinical practice reinforces the need for continuous training and the development of managerial competencies that integrate critical analysis, resource mobilization, and the selection of the most appropriate actions from multiple alternatives⁽⁷⁻⁸⁾.

In recent decades, the healthcare management landscape has undergone

significant transformations driven by globalization and the increasing competitiveness of the sector. Hospital institutions have been restructuring their management models to meet new demands influenced by epidemiological and demographic transitions. The adoption of decision support technologies, such as computerized systems that provide rapid access to data and evidence, has been identified as a promising solution to enhance decision-making in nursing⁽⁹⁾. Furthermore, professional development programs are fundamental for cultivating the critical skills that help nurses navigate uncertainty and make more assertive and effective decisions.

In this context, this study aims to assess nurses' knowledge of the managerial decision-making process and to identify how this knowledge is applied in their daily practice.

METHODS

This exploratory, quantitative study was conducted in 2019 at a specialized, high-complexity university hospital in São Paulo, which primarily serves patients of the Brazilian Unified Health System (*Sistema Único de Saúde* - SUS). The study investigated the Decision-Making Process (DMP) among nurses in both administrative and clinical roles.

Prior to data collection, the research project was submitted to the institutional Research Ethics Committee, receiving approval under protocol number CAAE: 31496313.4.0000.5505. Subsequently,

authorization to conduct the study was obtained from the hospital's Nursing Directorate.

The target population, identified via a list provided by the Nursing Directorate, comprised all 522 active nurses at the institution: 44 in administrative positions (director, vice-director, managers, coordinators, supervisors, and advisory staff) and 478 in clinical roles. The final sample consisted of 181 nurses (34.7% of the total population), including 32 administrative and 149 clinical nurses, who agreed to participate by signing an Informed Consent Form (ICF). Nurses were excluded from the study if they were on leave or vacation, withdrew after starting the questionnaire, declined to participate, or could not be in their respective departments.

Data were collected using a two-part questionnaire. The first part gathered sociodemographic, educational, and professional data from the respondents, such as gender, age, marital status, education level, and professional experience.

The second part of the instrument consisted of 14 affirmative statements about the DMP, developed based on the theoretical framework of Marquis & Huston⁽⁸⁾. Responses were measured using a 5-point Likert-type scale, with scores assigned as follows: Strongly Agree = 5; Partially Agree = 4; Neither Agree nor Disagree = 3; Partially Disagree = 2; Strongly Disagree = 1. This scale was chosen for its ability to quantify attitudes and perceptions by assigning numerical scores to varying degrees of agreement.

Following data collection, statistical analysis was performed. For categorical variables, the chi-square test or Fisher's exact test (in cases of cells with zero values) was used to assess the independence between variables across two or more independent samples⁽¹⁰⁾. For continuous variables (age, year of graduation, years of experience as a nurse, tenure at the institution, and time in the current role), Student's t-test was used to compare the means between the nurse groups (administrative vs. clinical). All statistical tests were conducted with a significance level set at $p < 0.05$.

The internal consistency of the questionnaire was assessed using Cronbach's Alpha. Item-total correlation analysis revealed that items 11 and 12 were negatively correlated with the others, necessitating that they be reverse-scored (i.e., Strongly Agree = 1 to Strongly Disagree = 5) to ensure all scores were positively oriented.

Subsequently, an exploratory factor analysis was conducted to identify underlying domains within the questionnaire. After identifying these domains, a simple summated score was calculated for each nurse within each domain⁽¹¹⁾.

The analysis resulted in the division of the statements into three distinct domains based on their similarities: Domain 1: Encompasses seven statements that address the theoretical aspects of the decision-making process, such as the definition of the decision-making process, the relationship between making decisions and solving problems, the Nursing Process as a

decision-making model, and the influence of personal values and preferences on decisions; Domain 2: Includes four statements related to the subjective aspects of decision-making, such as the learning of decision-making and critical reasoning skills, the influence of critical reasoning on the quality of decisions, and the preference for making decisions autonomously; and Domain 3: Consists of three statements that address the qualities of successful decision-makers, including risk aversion, empathy when making decisions that affect colleagues, and creativity in finding solutions to problems.

Finally, a descriptive analysis of the domain scores was performed for each nurse type, and boxplots were constructed to visualize the data distribution. These plots were used to display the median, quartiles, and the full range of scores, illustrating central tendency, dispersion, and symmetry of the data⁽¹²⁾. Student's t-test was used to compare the mean domain scores between the two nurse groups, with a significance level of $p < 0.05$.

The boxplots illustrate the distribution of scores for each domain, categorized by nurse type. Each plot displays the median (center line), the interquartile range (the box), and the overall spread of the data. Individual points beyond the whiskers represent outliers, indicating scores that deviated significantly from the rest of the group.

RESULTS

The sample consisted of 181 nurses, of whom 32 were in administrative roles and 149 were in clinical roles, which allowed for a

comparative analysis between the groups. The results cover sociodemographic characteristics, professional experience, specializations, and job positions, with an emphasis on the implications of these factors for managerial decision-making

in hospital nursing. The goal is to identify patterns, differences, and gaps in the development of managerial competence.

Table 1 - Sociodemographic and professional characteristics of nurses, according to their role.

Variables	Nursing		Total (n=181)	p- value	Fisher's p- value
	Administrative (n=32)	Clinical (n=149)			
Gender:					
Female	31/32 (96.9%)	132/149 (88.6%)	163/181 (90.1%)	0.273	
Male	1/32 (3.1%)	17/149 (11.4%)	18/181 (9.9%)		
Age: Mean $\pm$ sd	18.8 $\pm$ 8 (n=32)	14.5 $\pm$ 9.2 (n=148)	15.3 $\pm$ 9.2 (n=180)	0.017	
Marital status:					
Single	11/32 (34.4%)	81/148 (54.7%)	92/180 (51.1%)		0.113
Married	18/32 (56.2%)	59/148 (39.9%)	77/180 (42.8%)		
Divorced	3/32 (9.4%)	7/148 (4.7%)	10/180 (5.6%)		
Domestic partnership	0/32 (0.0%)	1/148 (0.7%)	1/180 (0.6%)		
Years since graduation: Mean $\pm$ sd	16.3 $\pm$ 6.6 (n=32)	9.8 $\pm$ 7.5 (n=148)	10.9 $\pm$ 7.8 (n=180)	<0.001	
Years since 1st specialization: Mean $\pm$ sd	11.1 $\pm$ 4 (n=30)	14.2 $\pm$ 88.4 (n=128)	13.6 $\pm$ 79.5 (n=158)	0.850	
1st Specialization:					
Adult ICU	0/30 (0.0%)	22/118 (18.6%)	22/148 (14.9%)		
Cardiology	3/30 (10.0%)	15/118 (12.7%)	18/148 (12.2%)		
Nephrology	2/30 (6.7%)	11/118 (9.3%)	13/148 (8.8%)		
Obstetrics	2/30 (6.7%)	8/118 (6.8%)	10/148 (6.8%)		
Pediatrics and Neonatology	0/30 (0.0%)	7/118 (5.9%)	7/148 (4.7%)		
ICU	7/30 (23.3%)	0/118 (0.0%)	7/148 (4.7%)		
Neonatology	1/30 (3.3%)	5/118 (4.2%)	6/148 (4.1%)		
Public health	0/30 (0.0%)	6/118 (5.1%)	6/148 (4.1%)		
Oncology	1/30 (3.3%)	4/118 (3.4%)	5/148 (3.4%)		
Operating room	1/30 (3.3%)	3/118 (2.5%)	4/148 (2.7%)		
Urgency and Emergency	1/30 (3.3%)	3/118 (2.5%)	4/148 (2.7%)		
Hospital administration	0/30 (0.0%)	3/118 (2.5%)	3/148 (2.0%)		
Medical-surgical clinical care	2/30 (6.7%)	1/118 (0.8%)	3/148 (2.0%)		
Occupational health nursing	0/30 (0.0%)	3/118 (2.5%)	3/148 (2.0%)		
Pediatrics	2/30 (6.7%)	1/118 (0.8%)	3/148 (2.0%)		
Administration	3/30 (10.0%)	0/118 (0.0%)	3/148 (2.0%)		
Adult health	1/30 (3.3%)	1/118 (0.8%)	2/148 (1.5%)		
Surgical center and CDDS	0/30 (0.0%)	2/118 (1.7%)	2/148 (1.4%)		
Teaching	0/30 (0.0%)	2/118 (1.7%)	2/148 (1.4%)		
Clinical and surgical nursing	1/30 (3.3%)	1/118 (0.8%)	2/148 (1.4%)		
Neonatal and pediatric ICU	0/30 (0.0%)	2/118 (1.7%)	2/148 (1.4%)		
Pediatric ICU	0/30 (0.0%)	2/118 (1.7%)	2/148 (1.4%)		
High-risk child care	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
Auditing	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
Surgical center/CSD/recovery room	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
Diagnostic center	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
Hospital epidemiology	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
Nursing management	1/30 (3.3%)	0/118 (0.0%)	1/148 (0.7%)		
Management	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
Geriatrics	1/30 (3.3%)	0/118 (0.0%)	1/148 (0.7%)		
Geriatrics and Gerontology	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
Health management	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
Nursing management	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
Health pastoral care	1/30 (3.3%)	0/118 (0.0%)	1/148 (0.7%)		
Nephrology residency	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
ICU residency	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
Family health	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
Family therapy	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
Organ transplant	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
Pediatric and neonatal ICU	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
Pediatric ICU and pediatrics	0/30 (0.0%)	1/118 (0.8%)	1/148 (0.7%)		
Years since 2nd specialization: Mean $\pm$ sd	9.2 $\pm$ 2.8 (n=12)	5.8 $\pm$ 6.6 (n=25)	6.9 $\pm$ 5.9 (n=37)	0.098	
2nd specialization:					
Adult ICU	0/13 (0.0%)	4/24 (16.7%)	4/37 (10.8%)		
Teaching / Nursing education	0/13 (0.0%)	3/24 (12.5%)	3/37 (8.1%)		
Nursing management	3/13 (23.1%)	0/24 (0.0%)	3/37 (8.1%)		
Organ transplantation	1/13 (7.7%)	3/24 (12.5%)	4/37 (10.8%)		

Cardiology	0/13 (0.0%)	2/24 (8.3%)	2/37 (5.4%)	
Wound care	2/13 (15.4%)	0/24 (0.0%)	2/37 (5.4%)	
Nephrology	1/13 (7.7%)	1/24 (4.2%)	2/37 (5.4%)	
Clinical research	0/13 (0.0%)	2/24 (8.3%)	2/37 (5.4%)	
ICU	2/13 (15.4%)	0/24 (0.0%)	2/37 (5.4%)	
Administration	1/13 (7.7%)	0/24 (0.0%)	1/37 (2.7%)	
Health services auditing	0/13 (0.0%)	1/24 (4.2%)	1/37 (2.7%)	
Bioethics	1/13 (7.7%)	0/24 (0.0%)	1/37 (2.7%)	
Continuing education	1/13 (7.7%)	0/24 (0.0%)	1/37 (2.7%)	
Occupational health nursing	0/13 (0.0%)	1/24 (4.2%)	1/37 (2.7%)	
Aesthetic nursing	0/13 (0.0%)	1/24 (4.2%)	1/37 (2.7%)	
Quality management	0/13 (0.0%)	1/24 (4.2%)	1/37 (2.7%)	
Teaching licensure	0/13 (0.0%)	1/24 (4.2%)	1/37 (2.7%)	
Methodology and Research in Nursing Care	0/13 (0.0%)	1/24 (4.2%)	1/37 (2.7%)	
Obstetrics	0/13 (0.0%)	1/24 (4.2%)	1/37 (2.7%)	
Public health	0/13 (0.0%)	1/24 (4.2%)	1/37 (2.7%)	
Urgency and emergency care	0/13 (0.0%)	1/24 (4.2%)	1/37 (2.7%)	
Cardiology ICU	1/13 (7.7%)	0/24 (0.9%)	1/37 (2.7%)	
Years since master's degree completion: Mean ± sd	2008.2 ± 2.8 (n=9)	2010 ± 3.1 (n=8)	2009.1 ± 3 (n=17)	0.232
Field:				
Neonatology	1/8 (12.5%)	2/8 (25%)	3/16 (18.8%)	1.000
Biotechnology	0/8 (0.0%)	1/8 (12.5%)	1/16 (6.2%)	
Pediatrics	1/8 (12.5%)	1/8 (12.5%)	2/16 (12.5%)	
Surgical sciences	1/8 (12.5%)	0/8 (0.0%)	1/16 (6.2%)	
Production engineering – quality and productivity	1/8 (12.5%)	0/8 (0.0%)	1/16 (6.2%)	
Clinical gastroenterology	1/8 (12.5%)	0/8 (0.0%)	1/16 (6.2%)	
Nursing management	1/8 (12.5%)	0/8 (0.0%)	1/16 (6.2%)	
Humanization in nursing/Patient advocacy	0/8 (0.0%)	1/8 (12.5%)	1/16 (6.2%)	
Oncology	0/8 (0.0%)	1/8 (12.5%)	1/16 (6.2%)	
Systematization of nursing care (SNC)	1/8 (12.5%)	0/8 (0.0%)	1/16 (6.2%)	
Public health	0/8 (0.0%)	1/8 (12.5%)	1/16 (6.2%)	
Safety and technology	0/8 (0.0%)	1/8 (12.5%)	1/16 (6.2%)	
Technology applied to management and tissue regeneration	1/8 (12.5%)	0/8 (0.0%)	1/16 (6.2%)	
Years since PhD degree completion: ongoing	2/2 (100.0%)	-	2/2 (100.0%)	
Experience as a nurse (years): Mean ± sd	16.2 ± 11 (n=32)	21.4 ± 11.5 (n=149)	20.5 ± 11.6 (n=181)	0.020
Time at the institution (years): Mean ± sd	18.6 ± 11 (n=32)	20.2 ± 11.1 (n=149)	19.9 ± 11.1 (n=181)	0.479
Current position:				
Nurse	0/32 (0.0%)	149/149 (100%)	149/181 (82.3%)	<0.001
Coordinator	18/32 (56.2%)	0/149 (0.0%)	18/181 (9.9%)	
Manager	11/32 (34.4%)	0/149 (0.0%)	11/181 (6.1%)	
Supervisor	2/32 (6.2%)	0/149 (0.0%)	2/181 (1.1%)	
Vice-Director	1/32 (3.1%)	0/149 (0.0%)	1/181 (0.6%)	
Time in current position (years): Mean ± sd	15.8 ± 12.7 (n=32)	17.6 ± 9.9 (n=149)	17.3 ± 10.4 (n=181)	0.379
Work shift:				
Night	2/32 (6.2%)	81/149 (0.0%)	83/181 (1.1%)	<0.001
Afternoon	0/32 (0.0%)	49/149 (32.9%)	49/181 (27.1%)	
Full-time	30/32 (93.8%)	0/149 (0.0%)	30/181 (16.6%)	
Morning	0/32 (0.0%)	19/149 (12.8%)	19/181 (10.5%)	

The table shows that most the nurses (90.1%) are women, with only a slight difference between the administrative (96.9%) and clinical (88.6%) groups, which was not statistically significant ($p=0.273$). Regarding age, the difference between the groups was statistically significant ($p=0.017$), suggesting that administrative nurses are, on average, older. Most administrative nurses are married (56.2%), whereas the clinical nurses have a higher proportion of single individuals (54.7%). This

difference between the groups was not statistically significant ($p=0.113$).

Administrative nurses had, on average, 16.3 years of experience since graduation, while clinical nurses have an average of 9.8 years ($p<0.001$). This indicates that administrative nurses have more years of education and professional experience, which may translate into greater confidence in managerial decision-making.



Among administrative nurses, a considerable proportion holds specializations in areas such as Stomal Therapy (15.4%) and Nursing Management (23.1%). In contrast, clinical nurses show a wider distribution of specializations with no clear predominance. This may influence the practical application of managerial knowledge, as education and specializations directly impact decision-making competencies. Administrative nurses have an average of 15.8 years of experience in their current role, while clinical nurses have an average of 17.6 years ($p=0.379$). This difference is not statistically significant but reflects the cumulative experience of nurses in their respective functions.

To deepen the understanding of the decision-making process as a managerial competency, Table 2 was created to synthesize the main questions and responses from the survey. The table reflects the nurses' familiarity with theoretical concepts and reveals perceptions

and practices extracted from the data analysis. The questions were structured based on the domains identified in the factor analysis—theoretical aspects, subjective aspects, and qualities of decision-makers—allowing for an understanding of how nurses apply knowledge in practice, their confidence levels, and their needs for continuous improvement.

The data were divided among the three domains identified through factor analysis: Domain 1: theoretical aspects of decision-making, encompassing statements related to conceptual knowledge of the decision-making process (statements 2, 3, 6, 7, 8, and 10); Domain 2: subjective aspects of the decision-making process, such as the influence of personal experiences and the use of critical reasoning (statements 1, 4, 9, and 11); and Domain 3: qualities of good decision-makers, including creativity and a willingness to seek new ways to solve problems (statements 12, 13, and 14).

Table 2 - Distribution of responses to the statements, by nurse type.

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. Problem-solving, decision-making, and critical reasoning are skills that can be learned and improve with practice.	Adm: 0 Cli: 0	Adm: 0 Cli: 2	Adm: 0 Cli: 2	Adm: 14 Cli: 64	Adm: 18 Cli: 81
2. Decision-making is the process of choosing one or more alternatives from many for the actions to be taken.	Adm: 2 Cli: 0	Adm: 6 Cli: 10	Adm: 1 Cli: 16	Adm: 16 Cli: 92	Adm: 7 Cli: 31
3. For you, the terms "decision-making" and "problem-solving" are synonymous.	Adm: 1 Cli: 10	Adm: 19 Cli: 90	Adm: 5 Cli: 21	Adm: 7 Cli: 26	Adm: 0 Cli: 2
4. If critical reasoning were taught in schools, it would influence the quality of decision-making and problem-solving.	Adm: 0 Cli: 0	Adm: 3 Cli: 16	Adm: 6 Cli: 19	Adm: 12 Cli: 76	Adm: 11 Cli: 38
5. When making decisions, you follow steps: identify the problem; gather data to analyze the causes and consequences of the problem; investigate alternative solutions; evaluate alternatives; selects the appropriate solution; implement decision-making; and evaluate outcomes.	Adm: 0 Cli: 0	Adm: 1 Cli: 3	Adm: 0 Cli: 5	Adm: 14 Cli: 87	Adm: 17 Cli: 54
6. The nursing process is considered an efficient model for decision-making.	Adm: 0 Cli: 1	Adm: 1 Cli: 9	Adm: 7 Cli: 34	Adm: 18	Adm: 32 Cli: 24



				Cli: 81	
7. Your values, life experience, and individual preferences influence you when making decisions.	Adm: 2 Cli: 1	Adm: 3 Cli: 19	Adm: 4 Cli: 21	Adm: 18 Cli: 84	Adm: 5 Cli: 24
8. The decision-making process involves knowledge, skills, and attitudes essential to this competency.	Adm: 1 Cli: 0	Adm: 0 Cli: 0	Adm: 0 Cli: 3	Adm: 17 Cli: 78	Adm: 14 Cli: 68
9. I have had to make decisions in the professional environment with which I did not agree.	Adm: 0 Cli: 1	Adm: 2 Cli: 17	Adm: 3 Cli: 11	Adm: 22 Cli: 93	Adm: 5 Cli: 27
10. The position you hold influences the decisions you make and whether an administrative decision needs to be merely satisfactory.	Adm: 0 Cli: 0	Adm: 7 Cli: 29	Adm: 12 Cli: 60	Adm: 12 Cli: 50	Adm: 1 Cli: 10
11. You prefer to make decisions alone, without asking for others' opinions, using the information available at the moment.	Adm: 14 Cli: 23	Adm: 13 Cli: 100	Adm: 5 Cli: 19	Adm: 0 Cli: 7	Adm: 0 Cli: 0
12. When making decisions, I do not like to take risks.	Adm: 5 Cli: 12	Adm: 19 Cli: 70	Adm: 4 Cli: 31	Adm: 4 Cli: 32	Adm: 0 Cli: 4
13. I tend to put myself in my colleague's place when making a decision that will directly affect them.	Adm: 2 Cli: 0	Adm: 0 Cli: 5	Adm: 1 Cli: 13	Adm: 19 Cli: 93	Adm: 10 Cli: 38
14. I am not content with pre-established ways of solving problems. I am creative and like to find new paths to solve problems.	Adm: 0 Cli: 3	Adm: 1 Cli: 4	Adm: 5 Cli: 38	Adm: 17 Cli: 78	Adm: 9 Cli: 26

Adm. – Administrative; Cli. – Clinical.

Knowledge about Decision-Making

The analysis of the questionnaires revealed no significant differences between the knowledge of administrative and clinical nurses regarding the DMP. Most nurses in both groups demonstrated familiarity with the theoretical concepts of decision-making, including the importance of following steps in the decision-making process and the influence of personal values on the choices made.

The mean scores of the nurses in each domain did not show significant variations between the administrative and clinical groups ($p>0.05$). Although they demonstrated knowledge about the DMP, none of the nurses

followed a structured or updated model for decision-making. In general, decisions were based on personal criteria, habits, and routines, highlighting the prevalence of traditional management models.

Descriptive Analysis of the Domains

To better organize the discussion, the statements were described according to the domains suggested by the factor analysis. In Domain 1, which addresses theoretical aspects, the overall mean score was high, indicating that both groups have a good level of knowledge about the formal steps of the decision-making process.



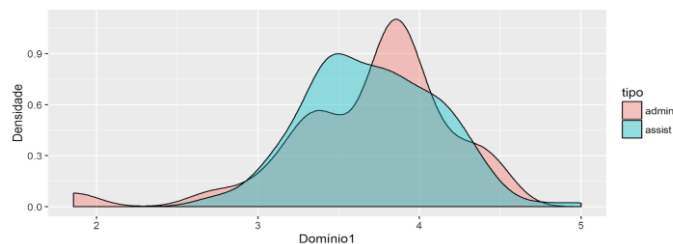
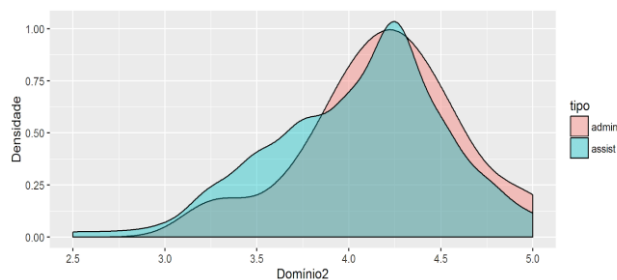
Figure 1 - Score density by nurse type for Domain 1.

Figure 1 illustrates the score densities for administrative and clinical nurses in Domain 1. The density curves for both groups show very similar behavior, although the curve for administrative nurses has a more pronounced peak. This suggests that, overall, the responses of administrative and clinical nurses were quite similar for the statements in this domain.

In Domain 2, which covers the subjective aspects of decision-making, a greater variation in responses was observed, indicating individual differences in the perception and application of the decision-making process. Figure 2 presents the score density for nurses in this domain, again demonstrating similarities between the groups, regardless of their position at the institution.

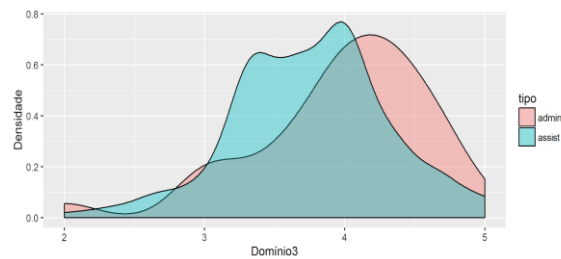
Figure 2 - Score density by nurse type for Domain 2.

A very sharp peak in the density curve is observed for both roles, with the distributions nearly overlapping, showing a strong similarity in the responses of administrative and clinical nurses.

Nearly 100% of the nurses surveyed believe that problem-solving, decision-making, and developing critical reasoning are skills that can be learned. Furthermore, 75.7% agree that if critical reasoning were taught in schools, it would have a positive impact on the quality of decisions made. More than 80% of the nurses

report having made decisions with which they did not agree and state that they do not like to make decisions alone, which aligns with the current trend of participatory management.

In Domain 3, which assesses qualities such as creativity and willingness to take risks, the scores were moderate, indicating that most nurses prefer to avoid risks and tend to adopt more traditional approaches to decision-making. Figure 3 presents the score density for nurses in this domain, and once again, the distributions overlap, reinforcing the study's findings.

Figure 3 - Score density by nurse type for Domain 3.

It is interesting to note that 12.5% of administrative nurses and 24.2% of clinical nurses do not like to take risks when making decisions. Additionally, 88.4% of nurses state they put themselves in their colleagues' position when making a decision, while 81.2% of administrative nurses and 69.7% of clinical nurses are not content with standardized solutions for solving problems. These three statements complement each other and were therefore grouped into Domain 3. Although there is some disagreement among experts, many agree that the essential qualities of a successful decision-maker include courage, sensitivity, and creativity.

The Cronbach's Alpha coefficient was calculated to assess the internal consistency of the questionnaire, yielding a value of 0.81, which is considered satisfactory for studies using Likert-type scales. Furthermore, the factor analysis confirmed the appropriate distribution of the statements into three domains, demonstrating the validity of the instrument used.

DISCUSSION

Managerial DMP in hospital nursing is a dynamic and multifactorial process, influenced

by individual, organizational, and contextual factors. The results of this study revealed that although nurses possess theoretical knowledge about the decision-making process, a significant gap exists between this knowledge and its practical application. Most participants, in both clinical and administrative roles, reported basing their decisions on previous experiences, habits, and routines rather than on structured, evidence-based models. This trend suggests an urgent need for training and the restructuring of decision-making processes in hospital nursing.

The analysis of the three decision-making domains revealed that in Domain 1, which addresses the theoretical aspects of the decision-making process, such as its definition, nurses demonstrated familiarity with the concepts. However, this theoretical foundation does not necessarily translate into consistent managerial practices, as shown by the absence of a structured model guiding their decisions. This finding supports the literature that highlights the importance of integrating theoretical knowledge with practical application in the hospital context⁽⁸⁾.

In Domain 2, which deals with the subjective aspects of the decision-making process, a strong influence of personal factors,

such as individual values and prior experiences, was identified. A reliance on intuition and subjective judgments can compromise the effectiveness of decisions, especially in high-complexity hospital environments where adopting systematic, evidence-based approaches is essential to ensure patient safety and quality of care⁽¹³⁾. The literature also indicates that emotional factors and cumulative experience directly influence how nursing professionals make decisions, which can result in both benefits and cognitive biases that affect the objectivity of the process⁽¹⁴⁾.

In Domain 3, which assesses creativity and the willingness to take risks, the results indicate that most nurses prefer traditional and conservative strategies. This tendency may be related to the prevailing organizational culture in hospitals, which often values predictability and risk reduction over innovation and experimentation with new approaches⁽¹⁵⁾. Although safety is a fundamental aspect of hospital care, resistance to innovation can limit the adoption of more effective practices and the implementation of improvements in healthcare service management.

Another critical factor identified was the influence of workload on decision-making. Task overload, high clinical demand, and the need to respond quickly to emergency situations can restrict the ability of nurses to critically analyze their decisions and seek more effective alternatives. Previous studies suggest that burnout and occupational stress negatively

impact the quality of managerial decisions in nursing, increasing the likelihood of errors and reducing the efficiency of care⁽⁶⁾.

Given this scenario, implementing strategies that promote continuous training, and the use of decision support technologies is essential to enhance the decision-making process in hospital nursing. The use of computerized tools that provide quick access to clinical guidelines and evidence-based protocols can facilitate decision-making and reduce the reliance on subjective approaches. Furthermore, introducing active learning methodologies, such as realistic simulations, can contribute to the development of critical skills and the consolidation of evidence-based clinical reasoning⁽⁴⁾.

The literature also highlights that the managerial DMP in hospital nursing is influenced by personal, organizational, and contextual factors. Key factors impacting this process include self-confidence, feedback mechanisms, managerial support, and the integration of evidence-based practices. Regarding personal factors, the self-confidence of nurse managers is directly associated with better decision-making outcomes, fostering more assertive and efficient choices⁽¹⁶⁾. Additionally, resilience shows a positive correlation with managerial competence, enabling nurses to face the stress and challenges inherent in the decision-making process more effectively⁽¹⁷⁾.

Among organizational factors, support from senior management plays a fundamental



role in the quality of managerial decisions, significantly reducing the risk of errors and strengthening nurses' ability to lead with confidence⁽¹⁶⁾. Moreover, a positive practice environment contributes to the development of managerial competencies and enhances nurses' capacity to make strategic decisions with a stronger foundation⁽¹⁷⁾.

With respect to contextual factors, evidence-based decision-making is recognized as crucial for achieving better clinical outcomes and improving the efficiency of health services⁽¹³⁾. However, the inherent complexity of healthcare settings requires nurses to adopt a consultative approach, incorporating different perspectives into the decision-making process. This practice fosters more precise and client-sensitive planning⁽¹⁴⁾. By considering clinical, operational, and organizational variables, this approach broadens the capacity for strategic planning and resource allocation, resulting in more effective decisions and the optimization of care delivery⁽¹⁸⁾.

Furthermore, several institutional factors influence managerial decision-making in hospital nursing. Key among them is access to high-quality information, economic considerations, leadership, workforce capacity, organizational climate, and decision-maker characteristics, such as demographics and experience, as well as political and regulatory influences⁽¹⁹⁾.

One study revealed that several nurses reported relying on their previous experience

when facing challenging decisions related to patient care or unit management. The participants associated higher levels of experience with better decision-making outcomes, emphasizing that this process is influenced by multiple organizational factors that can either facilitate or hinder the DMP. The study also highlighted the impact of workload on nurses' decision-making. In this context, participants pointed to several factors that increase workload and consequently reduce their ability to make effective decisions, including high patient-to-nurse ratios, performing non-nursing tasks, and frequent interruptions during the workday⁽²⁰⁾.

Another study identified the main areas of decision-making that influence managerial processes in hospitals, including strategic management, human resources management, and service delivery management. Hospital managers, along with other decision-makers, significantly impact nursing decisions, reflecting a collaborative approach to resolving various institutional issues⁽²¹⁾.

The literature emphasizes that the main factors influencing managerial decision-making in hospital nursing include experience, knowledge, the organizational environment, team dynamics, supervisor support, and professionalism. These elements foster more effective clinical decisions, with a direct impact on patient safety and care outcomes⁽²²⁾. Such findings reinforce the need for institutional policies that promote the development of



managerial competencies among nurses, ensuring a safer, more efficient decision-making process aligned with best practices. Strengthening these competencies contributes to the efficiency of health services, professional satisfaction, and patient safety, cementing decision-making as a central axis of the nurse manager's role⁽²³⁾.

The limitations of this study include that it was conducted at a single institution, which may have contributed to more uniform results. Another aspect to highlight is that an instrument developed specifically for this study was used, as no suitable instrument was found in the Portuguese literature.

As contributions from this study, we recommend investing in continuing and/or permanent education, innovative methodologies such as realistic simulations, decision support technologies, and computerized systems. We also point to the importance of reforming the organizational culture by adopting participatory leadership models that stimulate creativity and safer decision-making. Finally, we reinforce the need to review teaching and professional development strategies, incorporating new management models and active methodologies to strengthen the managerial competence of nurses.

CONCLUSIONS

Managerial decision-making in hospital nursing is essential for the quality of care. This study revealed that although nurses recognize its importance and demonstrate theoretical

knowledge, they do not utilize structured models, relying instead on experiences and routines. This subjective practice can compromise patient safety and managerial effectiveness, highlighting the need for institutional strategies that promote systematic, evidence-based decisions.

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