Nursing governance and its impact on the quality of organization of health care services for older people in the Catalan region of Spain

La Gobernanza Enfermera y su impacto en la calidad en la organización sociosanitaria en Catalunya

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ABSTRACT:

Introduction: Nursing governance consists of decisions made by nursing leaders in health organizations that respond to the needs of interest groups. Nursing leaders in the realm of social-health or intermediate care in Catalonia (Spain) were studied.

Objective: Analyze the governance variables in the social-health realm and their relationship with the quality perceived by patients.

Methodology: Governance data was collected through a nursing governance questionnaire and patient satisfaction measured through Plaensa® (CatSalut 2013 patient satisfaction surveys). The consent of participants and approval by a bioethics committee were obtained. The statistical programs SPSS (from IBM) and Atlas.ti were used for data analysis.

Results: Thirty-four (43.6%) nurses responded to the nursing governance questionnaire and nine to the Plaensa®. Information was collected about age, education, gender, years of experience and number of beds. The data collection took place between September 2014 and April 2015. The data was analyzed with a significance level of 5% and through nonparametric statistical tests. Correlations were found between patient satisfaction (Spearman) and: “Quality influences decisions” (p=0.006), “Research and update knowledge” (p=0.043), and “Develop strategic communication” (p=0.043). These results were similar to those obtained in studies such as Magnet Model®.

Conclusions: It would be worth delving deeper into the topics of governance, quality, knowledge, and communication through qualitative research. In the view of nurses, decision-making experience, power, representativeness, and care are inter-related, despite participation.

Key words: Nursing governance; Organization of health care services; Quality.

RESUMEN:

Introducción: La Gobernanza enfermera consiste en la toma de decisiones de la líder de enfermería en la organización sanitaria y responde a las necesidades de los grupos de interés. Se estudiaron las líderes enfermeras del ámbito sociosanitario o de atención intermedia de Catalunya (España).
**Objetivo**: Analizar las variables de Gobernanza en el ámbito sociosanitario y su relación con la calidad percibida por el paciente.

**Metodología**: Se recogieron datos de Gobernanza mediante el Cuestionario de Gobernanza Enfermera (CGE) y Satisfacción de pacientes medidos con Plaensa® (Encuestas de satisfacción del paciente del CatSalut) 2013. Se obtuvieron los consentimientos y aprobación por el Comité de bioética. Se usaron los programas SPSS de IBM y Atlas-Ti para el análisis de los datos.

**Resultados**: Respondieron 34 enfermeras (43,6%) al CGE y al Plaensa® 9 de ellas, edad, formación, sexo, años de experiencia y nº de camas, de septiembre 2014 a abril 2015. Los datos se analizaron con una significación del 5% y pruebas estadísticas no paramétricas. Se hallaron correlaciones con la Satisfacción del paciente (Spearman) y: “La calidad influye en las decisiones” (p=0,006), “Investigar y actualizar conocimientos” (p=0,043), y “Desarrollar comunicación estratégica” (p=0,043). Estos resultados se asemejaron a los obtenidos en estudios como el Magnet Model®.

**Conclusiones**: Es conveniente profundizar en la Gobernanza, la Calidad, el Conocimiento y la Comunicación mediante la investigación cualitativa. Para las enfermeras están interrelacionadas entre sí la experiencia en Tomar decisiones, Poder, Representatividad y Cuidados, a pesar de la participación.

**Palabras clave**: Gobernanza enfermera; Organización sociosanitaria; Calidad

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**INTRODUCTION**

The Catalan health care model has a care level called social-health or intermediate that provides intensive multidisciplinary expert inpatient care that does not need hospital health technology and cannot be offered in the community since some of it is complex. This sector complements hospital and primary care. It is found in acute care hospital structures, mental health centers, and old age centers or those exclusively for social-health. The nursing profession, its leaders and development are essential for care quality and the sustainability of the health system 1-3.

Little or nothing is known to date about the development of the profession from this perspective in the Catalan context. It has been studied in North American hospital settings, where it is more common and has existed for more years. This phenomenon is called corporative or collaborative governance. It consists of the balanced development of certain dimensions that, in the hands of nursing leaders of social-health organizations, interact and complement each other. These dimensions are leadership style, transformational culture, transparency and accountability, power and authority, commitment and sustainability, ethics and multidisciplinary teams, to satisfy the needs that interest groups (both inside and outside the organization) have in relation to it 4-6. The interest groups of nursing leaders are patients, nurses, health agencies and insurers, providers, universities, scientific societies, managers and the governing structure of the organization.

The idea is that the decisions made by nursing leaders will coincide inclusively with the needs of the interest groups and the mission and values of the organization, in order to make decisions with the highest possible level of quality, autonomy, and competence. The exercise of governance, unknown thus far in the social-health sphere, may be associated with the quality perceived by patients 7-11, measured in Catalonia with Plaensa®, which are surveys to detect the satisfaction of patients during their stay in the center under the responsibility of Servei Català de la Salut (2013 edition).

The governance data for head nurses in the social-health sphere of Catalonia was analyzed and will confirm or not the relationship with quality perceived by patients. The literature that was consulted reinforces the relationship between governance and quality: according to the North American program Magnet Model®, implemented for more than 20 years in the hospital sector. Its implementation and assessment are
designated to provide quality, among other aspects. Such guarantees are related to the culture of the organization, sustainability, nursing productivity and the well-being of professionals and patients.\textsuperscript{12-16}

**MATERIAL AND METHODS**

All of the nurses with intermediate or managerial positions from social-health centers or with social-health beds in Catalonia were invited to participate in the study. A list of centers, published on the website of CatSalut for 2014, was used to contact these professionals by phone. The researcher introduced herself, presented the study and invited each person to participate. Assurances were given regarding confidentiality and that the study had been approved by the Bioethics Committee of the University of Barcelona. The ways to obtain the questionnaire, which would take 15 minutes, and means of contact were explained.

An analytical study of the variables and knowledge about them was performed. It was decided to use a quantitative methodology supplemented with narrative data that would enrich the responses:

- Governance: through an expressly designed questionnaire whose content was validated by experts (Nursing Governance Questionnaire).

- Sociodemographic: Education, age, gender, years of experience and number of beds.

- Perceived quality: through the Plaensa\textsuperscript{©} satisfaction survey.\textsuperscript{16}

The Nursing Governance Questionnaire is self-administered and has 26 items resulting from a literature review on decision-making and the nursing governance model measured with the Index of Professional Nursing Governance (IPNG). The IPNG questionnaire has been widely used in North American hospitals. It has 88 items depending on the nurse's hierarchical level and inquires about shared governance principles through six dimensions: monitoring of professionals, participation, conflict resolution, facilitating structures, information access, and alignment, through which decision-making for controlling the nurse's normal practices is measured. It has psychometric properties which are comprehensively evaluated through high levels of participation, numerous editions, focus groups for discussing it, and validation of content and internal consistency. Hess, in different editions, assessed the instrument and incorporated improvements until it was accepted as the customary evaluation instrument in hospitals with magnet status.\textsuperscript{4}

The items from the Nursing Governance Questionnaire were written based on concrete actions, in affirmative, clear and concise terms, and are grouped by dimensions according to their meaning, as the literature referenced them. Data was collected on sociodemographic characteristics (sex and age), level of education (undergraduate/postgraduate or master's degree), minimum of five years of experience in the same center and number of beds. In addition, all the questions on the Nursing Governance Questionnaire provide an option to write comments based on the experience or opinion of the nursing leader surveyed.\textsuperscript{17-24}

This questionnaire was evaluated by a panel of experts comprised of five professionals, nurses and physicians from the spheres of teaching, research and
management, using the Delphi method. The goal was to achieve a minimum 80% agreement in terms of the relevance and clarity of each question, as well as the possible answers. In the first consensus round there were suggestions related to the text and grouping of items by coincidence into the main ideas, which were incorporated into the second version. In the second round there was a minimum consensus of 90% regarding the relevance and clarity of the questions.

Optionally, the nurses surveyed could provide the data they obtained in the 2013 edition of the Plaensa©. This questionnaire is an instrument widely used by the public health insurer to find out about patient satisfaction for all the lines of services contracted by patients for more than ten years, including social-health. Its construction and periodic review adhere to a strict and exhaustive process involving a literature review, expert groups and focus groups with patients. In addition, all the items have a statistically significant factor loading and are discriminant between themselves.

Of the 28 sections in this survey, 13 were selected related to nursing and care. They inquire about the role of nurses, relationship with patients and the care provided by the nursing team. These items are used to check whether there is a possible relationship between decision-making and the quality perceived by patients. This selection of items was also validated by a panel of experts. The response options on this questionnaire have categories ranging from very dissatisfied to very satisfied, except for overall satisfaction, which is measured using a scale from 1 to 10, where 1 is very poor and 10 is excellent.

The response items on the Nursing Governance Questionnaire, validated by a panel of experts, used a Likert scale with five categories: 1- I do not have an opinion, 2- I do not agree and do not usually apply it, 3- I do not agree, but usually apply it, 4- I agree, but do not usually apply it, 5- I agree and usually apply it. Survey respondents must choose one of the options and complement their response through the text option for each item.

The study population was 78 nurses who met the inclusion criteria: having a managerial or intermediate position and more than five years of experience. The collection and storage of the responses took place from September 2, 2014 to April 1, 2015, in an anonymous database.

A bivariate statistical analysis was performed to analyze governance, sociodemographic, and Plaensa© variables; parametric tests were selected based on the normality assumption. Nonparametric tests were chosen for small sample sizes: Mann-Whitney U-Test, Fisher's exact test and Spearman's rank correlation coefficient. A statistical significance of 5% (p-value = 0.05) was used, except for one justified case where 7% (p-value = 0.07) was accepted. The statistical program SPSS version 22 from IBM was used for data analysis.

For the analysis of the optional texts written by the survey respondents, the content analysis method was used with a repetitive reading of the responses. A repetitive and systematic reading enabled the meaning units to be categorized. Technical support from the program Atlas.ti version 5.0 was also used.

Consent to participate in the study was requested and obtained from all the nurses and the person in charge of the center.
RESULTS

A total of 34 nurses (43.6%) hired by CatSalut participated. Of these, 28 (82.4%) were women, with a mean age of 46 years (standard deviation of 8.3). In terms of experience, recoded at more or less than 10 years, 21 (61.8%) had more than 10 years of experience and 13 (38.2%) had up to 10 years of experience.

In relation to the distribution of years of experience (more or less than 10 years) and age (recoded at more or less than 43 years), it was noted that among those who had up to 10 years of experience, 4 (25%) were older than 43, and 9 (75%) were younger than 43. In contrast, among those with more than 10 years of experience, 12 (75%) were older than 43, and 9 (50%) were younger than 43.

A statistically significant correlation was found between gender (female) and four of the items from the nursing governance questionnaire (Table 1): I make sure I have the procedures, protocols and guides (Mann-Whitney, p-value = 0.047); I plan and carry out management according to the strategic plan (Fisher's exact test, p-value = 0.027 and Mann-Whitney, p-value = 0.05); I am familiar with the management systems for the purchase and storage of health materials (Mann-Whitney, p-value = 0.035); I have the knowledge to influence decisions in non-care areas (Fisher's exact test, p-value = 0.05). A statistically significant correlation was also detected between recoded years of experience (10 years or less, or more than 10 years) and the item "I research and update my knowledge through specific literature on health management and administration" (Mann-Whitney, p-value = 0.07).

The results for age and recoded age (<43, >=43 years), level of education and number of beds (<=50, >50) were omitted for 26 of the items, since their p-value was higher than 0.05.
Table 1. Statistically significant results obtained from the bivariate analysis between the governance and gender variables (p-value <=0.05) and recoded years of experience (p-value = 0.07).

<table>
<thead>
<tr>
<th>Items from the Nursing Governance Questionnaire</th>
<th>Sex (Male or Female)</th>
<th>Recoded years of experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I tailor the supply of my services to the needs of my interest groups.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>2. I incorporate the voice of the customer as an information source.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>3. I ensure high patient care continuity.</td>
<td>= 0.047*</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>4. I make sure procedures, protocols and guides are available.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>5. I promote the updating of technology and management systems.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>6. I promote the development of roles and competencies.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>7. I know the benefits and potential of the health models.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>8. I participate in decisions such as economic compensation and other forms of motivation.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
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<tr>
<td>9. I actively participate in the overall processes of the organization.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>10. I have an influence on the decisions of the governing bodies of my organization.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>11. I indicate specific policies to identify and retain talented nurses.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>12. Health, social and economic policies influence my decisions.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>13. I plan, carry out and evaluate management according to a strategic plan.</td>
<td>= 0.05*</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>14. I continually assess processes and results in order to guide changes.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>15. I control healthcare costs in general and analytical terms.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>16. Results in technical quality - perceived and total internal and external - influence my decision making.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>17. I research and update my knowledge through specific literature.</td>
<td>&gt; 0.05</td>
<td>= 0.07*</td>
</tr>
<tr>
<td>18. I participate in benchmark initiatives promoted by the insurer and health authorities.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>19. I establish collaboration agreements with universities, nursing schools and auxiliaries.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>20. I periodically render accounts to management and the nursing team.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>21. I develop communication techniques as an element of strategic management.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>22. Nursing practices and all decisions are ethical and legal.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>23. A leadership model is what the organization needs.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>24. I am familiar with management systems for purchases and storage of health materials.</td>
<td>= 0.035*</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>25. I am well versed in people management within a legal and personal context.</td>
<td>&gt; 0.05</td>
<td>&gt; 0.07</td>
</tr>
<tr>
<td>26. I have the necessary knowledge to influence key decisions in non-care areas.</td>
<td>= 0.05*</td>
<td>&gt; 0.07</td>
</tr>
</tbody>
</table>

Fifteen out of the 34 nurses answered the questions from Plaensa©. In the analysis of their responses, statistically significant correlations were only found between three of the items from the nursing governance questionnaire and the Plaensa© item "Overall user satisfaction", analyzed with Spearman's coefficient:

- Results in technical quality - perceived and total internal (from the same organization) and external - influence my decision-making (p-value = 0.006).
- I research and update my knowledge through specific literature. (p-value = 0.043).
I develop communication techniques as an element of strategic management (p-value = 0.043).

There were no positive correlations with the following items from the Plaensa© survey:

- The nurses listen to you and take care of your needs.
- The waiting time when you ring for help is acceptable.
- They don't talk in front of you as though you weren't there.
- You feel you're in good hands.
- You value the help they give you.
- Respect for privacy.
- Personalized care by the nurse.
- I would go back to this hospital should the need arise.

With respect to the analysis of the written comments on the nursing governance questionnaire, the respondents were almost all women (n=28). There were a total of 178 comments. The most frequent and interesting were coded as empowerment and making care decisions, and governance.

As far as empowerment and making care decisions, they talked about governance of the work team: (“they assess competencies, but do not always have the means to retain talented nurses”), (“I do not have full control over care management (subordination to managers and medical directors)”), (“We do not have agile tools to monitor nursing care indicators”), their training (“Through management courses, master's degrees”), (“via Moodle, if possible”), (“I promote courses and participation in forums and committees”) and patient care (“We think about the needs of patients”, (...) and try as much as possible to take care of them. But we are not proactive. We don't ask patients what they expect from us; we wait for them to complain”).

With respect to empowerment and making governance decisions, they reported certain elements of representativeness (“I participate in the management team, but the decisions are often already made at other levels”), (“I have knowledge, even though it does not always influence key decisions in non-care areas”), accessibility to the governing body (“influence on the governing body is very little, through third parties”) and external alliances (“we collaborate with the university, scientific associations, and professional associations, and take part in delegations”).

DISCUSSION

There were few nurses that participated and, consequently, the results should be viewed as providing a starting point. From there, there was a bias in terms of representativeness and participation: the sample was not representative and those who participated were more inclined toward the study topic.

In terms of the results analysis and construction of the nursing governance questionnaire, the prior absence of a reference standard with which to compare the results can also be considered a limitation. Furthermore, the data was not collected using an instrument with the necessary psychometric properties. The validity and reliability of the measurement instrument (nursing governance questionnaire) were not achieved due to the population size. Despite this, it served to generate knowledge and questions that shed light on nursing governance 25.
This reality coincides with Anthony in her review of shared governance models developed over the last 25 years. She argued that the evidence was limited to providing anecdotal experiences of better results in aspects such as good team relations, fewer conflicts and better satisfaction of nurses, among others. In her view, long-range studies and second-generation models of governance in organizations that apply methods of analysis such as focus groups involving nurses, nursing leaders, administrators and other professionals, are needed.

The influence of nursing leaders upon governing bodies was not clear in most cases, which is consistent with the small impact they claimed to have in the overall management of the organization, due to the fact that their competence and leadership abilities were not recognized. Their criticism coincides with studies in the business realm by Bastons and Pérez who said that for an organization to be successful, the goals and achievements of those leading it must be shared and should prioritize the well-being of the community.

Other components of governance still not developed were training preparation and competencies in the workplace for nurses and nursing aides, in addition to promoting a good work climate, which is an elemental component of the quality of life of professionals. These principles have a direct bearing on assessment and perception of patients regarding the care they receive and its quality. This was also found to be the case in the review performed by Kroth and Akerdorjet on human resources in health organizations.

The comments of the nurses contained demands for recognition as health professionals within the framework of a new health model where paradigms have already changed to keep pace with the evolution of society and citizens who demand health and social care. They claimed to be able to represent care at the highest levels of health planning. The nurses said that other health professionals should naturally welcome their presence for the benefit of the health of the community, but to do so nurses must be prepared and take positions. According to Havens, in her review of nursing governance studies from 1990 to 1996, nurses were not represented on decision-making bodies and that their presence streamlines costs and ensures patient satisfaction, among other benefits.

Regarding the comparison of the results with the items from the Plaensa© survey, it was disconcerting that none of the nine items chosen to specifically observe the nursing operation had any relationship with any of the nursing governance items. However, there was a relationship with overall satisfaction, which concurred with the results of one of the most important and current studies conducted on the subject: according to a European and North American cross-sectional, multicenter study led by Aiken, with around 200,000 participants (patients and nurses) and more than 1,000 hospitals, there was a positive correlation between satisfaction and patient safety and nursing work and its commitment to quality.

With respect to the results for quality, research and updating of knowledge, and sustainability, it was clear that they are highly important and should be taken into account in future studies. More in-depth research may be able to explain why there was no relationship with the items from Plaensa© pertaining more specifically to nursing. At this point in time, it was not possible to deny or accept with certainty a correlation between nursing governance and perceived quality measured through Plaensa©. Nevertheless, there were interesting assertions to explore.
In 2013, Clavelle, Porter and Drenkard conducted a study of 344 organizations with magnet status, comparing the level of attraction and retention of nurses, measured with the IPNG (Index of Professional Nursing Governance) and NWI-R (Revised Nursing Work Index). They concluded that there was a positive correlation between shared governance and attraction and retention, measured with both instruments. They emphasized the role of nursing leaders to promote the design, implementation and facilitation of the structures and evaluation of the shared governance model. Some of the items from the Nursing Governance Questionnaire coincided with certain elements from the aforementioned instruments: information access, resources that facilitate nursing practices, participation in decision-making, respect for objectives, autonomy, physician-nurse relationship and organizational support, among others.

The comparison between instruments, part of the design, content, and methodology suggested correlations as well as surmountable and insurmountable differences: there is a major divergence between the Catalan and North American realities in terms of funding for research and academic, professional and scientific organizations that are interested and invest in these studies. There were also differences between the health models, provision of services, curricular training, levels and trajectories of nurses, among many other aspects. Furthermore, as shown in the literature, each measurement instrument must be tailored to its health model and the organization in which it will be applied.

CONCLUSIONS

By following the lines that coincide with and differ from the literature, it will be possible to reformulate the dimensions and items of the Nursing Governance Questionnaire and include proposals for indicators tailored to the scope of nursing, such as: teaching (the presence of content related to governance in undergraduate programs), research (the search for principles of efficiency and effectiveness for making the best decisions), care (the extension of reference standards related to patient safety tailored to the needs of health and social care patients) and administration and management (representativeness in health policy bodies to protect the interests of citizens and health professionals).

At the same time, the ages of the nurses studied (mean of 46 years and median of 43 years), recoded years of experience and level of education had interests. The literature suggests that regeneration is an issue to be raised. However, it should be supplemented with reflections on the academic education and training of nurses. The most appropriate approach for today would be one that prioritizes a competency-based preparation according to years of experience and not knowledge. However, according to Bamford, nurses must have practice or accumulated experience as well as specific knowledge of their area of expertise in order to consolidate excellence in an organization. To achieve this, it is necessary to provide the necessary tools and require the corresponding responsibilities.

In terms of gender, the results obtained from the Nursing Governance Questionnaire related to being a woman and commitment to a specific work methodology (ensure having tools for decision-making and coherence with the strategic framework) were highly significant despite the sample. They indicate a very interesting line of study on the value of being a woman that embraces feminism in the organization, as opposed to a form of feminism that denigrates men.
In sum, the complexity of nursing governance warrants having other methods and methodologies to provide further knowledge: the analysis of the comments of the nurses on the questionnaire, collected with the appropriate techniques, will shed light on aspects of quality, knowledge, and sustainability of the health system, wherein nurses must take a firm stance.

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