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# Safe staffing

## Conceptions of primary health care nurses

### Summary

**Aim.** To know the conceptions that nurses, from Primary Health Care clinical practice, have of Safe Nurse Staffing. Safe Staffing is related to safe, high quality, high complexity care, in a variety of contexts. It is well established that safe nurse staffing and the quality of the practice environment are directly associated with client satisfaction, quality and safety of care, and nursing care-sensitive outcomes<sup>2</sup>.

**METHODS.** A descriptive exploratory study of a qualitative nature was carried out, using a questionnaire with open-ended questions. An intentional sample consisting of twenty five nurses was selected. The technique of content analysis<sup>7</sup> was used for data analysis and treatment.

**RESULTS.** Seven categories were identified (and respective subcategories): Safety of Care; Workload; Training and Professional Development; Quality of Care; Client Characteristics; Organizational Environment; Outcomes. These results allow stating that the nurses interviewed conceive the concept of Safe Staffing, on their work context, in accordance with the dimensions described by Aiken and collaborators<sup>1,2,3</sup>.

**CONCLUSION.** Nurses' conceptions of Safe Staffing integrate fundamental aspects associated with this concept, and may influence the strategies developed within the scope of clinical governance.

**KEYWORDS:** NURSING, SAFE STAFFING LEVELS, PRIMARY HEALTH CARE.

### Introduction

Healthcare clients have the right to be cared for by appropriately qualified and experienced staff, in safe environments<sup>26</sup>. In Portugal, these rights are enshrined in the Constitution of the Republic and in the statutes of the National Health Service (NHS). However, the responsibilities in terms of Safe Staffing are defined by the Order of Nurses (ON) in the regulation No. 533/2014 – Calculation standard for Safe Nurse Staffing. Safe nurse staffing, their qualifications level and skill profile are fundamental aspects for achieving safety and quality of care for the target population and organizations. With this purpose, methodologies and criteria that adjust human resources to the real care necessities should be used<sup>24</sup>.

According to the International Council of Nurses (ICN), the concept of Safe Staffing goes beyond the number of professionals required to ensure the delivery of safe and quality healthcare. It also includes other variables such as: workload, environment, client complexity, nurse qualification levels, other health professionals, cost efficiency and effectiveness, and link to client and nursing outcomes<sup>16</sup>. It also defends that Safe Staffing practices incorporate the complexity and intensity of nursing activities, nurses' levels of preparation, skill and experience, management support at the operational and executive levels, the contextual and technological environment of the health facilities, and the provision of whistleblower protection.

The concept of Safe Staffing is multidimensional, referring to a set of

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dimensions such as professional experience and continuing/advanced training, client characteristics/health needs and associated work load, nursing practice environment, client safety, nursing care-sensitive outcomes, client and staff satisfaction, as well as the performance of health organizations. The American Nursing Association considers the nursing team safe when the availability of nursing care is the appropriate shift-to-shift, taking into consideration client needs and a hazard free care environment<sup>5</sup>. The mix of competencies is the combination or grouping together of different categories of workers related to health care, in this case nursing<sup>5</sup> (e.g. nursing specialties, postgraduate training). The professional practice environment can be described as the system that supports nurses' control over nursing care, the environment in which the care is provided, and the organizational characteristics that facilitate or restrict the professional practice<sup>20,21</sup>. A safe work environment for nurses is characterized, among other factors, by good professional relationships, a management style based on support, a balanced work schedule, reconciliation between increased nurses' work and their mix of skills, an adequate profile to meet client needs, professional autonomy, adjustment of resources, and opportunities for professional promotion and development<sup>20,2,27,15,11</sup>.

Several studies have demonstra-

ted the importance of health organizations taking into consideration Safe Staffing on their units. In this context, was concluded that there is a strong relationship between number of nurses and mortality levels, complications and adverse effects and, furthermore, that a higher number of qualified nurses is associated with a lower mortality rate in hospitals<sup>18</sup>. Aiken and collaborators verified a positive relationship between advanced training of nurses and the reduction of early death probability in hospitalized patients<sup>4</sup>. In 2012, was conducted a study involving twelve European countries and the United States of America, where they concluded Safe Nurse Staffing and the quality of the clinical practice environment were directly associated with client satisfaction, quality and safety of care, and with the nursing-care sensitive outcomes<sup>1</sup>. Nursing care-sensitive indicators include, but are not limited to, mortality, internment time, hospital readmissions, and reduction of adverse effects<sup>5</sup>. To the same extent, job satisfaction is an important component of nurses' lives and has an impact on their performance, patient outcomes, safety and quality of care, as well as their commitment to the institution's goals<sup>22</sup>. The impact of work overload, insufficient patient care time, and the high number of patients per nurse are well documented and are associated with high turnover rates of these health professionals. Nursing work overload also has implications for patients, professionals and organizations. A systematic review of the literature was carried out with objective to evaluate the effects of work overload. Twenty one outcome measures in nurses and 19 outcome measures in clients were identified<sup>6</sup>. A strong relationship between extra work, long work period, and adverse outcomes for nurses was detected. As for clients, the authors point out that additional evidence is required to establish a direct relationship between working hours and adverse outcomes. It was demonstrated that increasing nurse workload in one patient per shift increases the patient's probability of dying on the first 30 days after admission by 7%<sup>4</sup>. Wagstaff and collaborators<sup>29</sup> tried to understand the effects of workload and safety. Their main findings are relevant for healthcare in general but their study was not performed with nurses. Work periods exceeding 8 hours represent an increased hazard risk and this risk is two-fold for 12 hour shifts. Shift work brings a significant increase in hazard risk while the so-called "normal period" work may provide protection against hazards. The authors did not detect any relationship between age and gender with either risk or protection factors. I was conducted a systematic review of the literature in order to identify the implications of workload on nurses' error rates, comparing shifts of 12 or more hours with shifts of less than 12h<sup>10</sup>. The main conclusion was that nurses who work shifts of 12 or more hours are more prone to making mistakes.

The starting questions that we are trying to answer are:

1. What is the conception that nurses, from Primary Health Care (PHC), have of Safe Nurse Staffing?

Our purpose with the present work is, therefore, to know the concepts that nurses from CSP have about Safe Staffing.

## Methods

A descriptive exploratory study of a qualitative nature was carried out, using a questionnaire with open-ended questions, in which the participants were asked to freely describe their concept of Safe Nurse Staffing. An intentional sample of twenty five nurses from a Health Center Group (HCG) of the North region was selected.

Since we intended to perform an objective and systematic depiction of the described content, we opted to use the content analysis technique<sup>7</sup>. This technique allows for a methodical treatment of the information contained

in the different communication formats and conforms to a wide field of application. The gathered material was reduced to general sentences and a theme coding system allowed the construction, for each topic, of a system of categories. The nomenclature assigned to the categories derived from the participants discourse and was also based on a review of the literature.

## Results

Data analysis resulted in seven thematic categories: Safety of Care; Workload; Training and Professional Development; Quality of Care, Client/Individual/Family Characteristics; Organizational Environment; Outcomes.

The analysis of the collected data allowed us to identify seven categories that nurses assume as characterizing the concept of Safe Staffing. Generally, their concepts are in line with what is shown in the literature.

## Discussion

However, we consider there are some dimensions of the Safe Nurse Staffing concept that were poorly explored by the respondents, namely organizational environment. As far as this dimension is concerned, only the technical means were mentioned as influencers of organizational environment. According to the literature, this dimension is related to fundamental aspects such as the practice environment, which is highly conditioning of nurse satisfaction and performance, as demonstrated by the conducted studies<sup>25</sup>. These studies aimed to understand the practice environments in the context of primary health care and the measures that promote retention of nurses in the sector. The results obtained by the researchers indicate that nursing professionals feel more satisfied with their performance and less likely to leave their workplaces in organizations that promote a practice environment favorable to nursing, in particular where there is a

CATEGORIES AND SUBCATEGORIES

1

CATEGORIES	REGISTRATION UNITS
<b>Safety of Care</b>	Clients Professionals Professional responsibility
<b>Workload</b>	No. patients/nurse No. families/nurse Task execution time Adequate records
<b>Training and Professional Development</b>	Adequate knowledge Procedures Coherence Professionalism Equity
<b>Quality of Care</b>	Good practice Accuracy Privacy Accessibility
<b>Client Characteristics</b>	Families Individuals Care needs
<b>Organizational Environment</b>	Technical means
<b>Outcomes</b>	Health gains Efficacy Efficiency

positive relationship with doctors and organization administrators, and where their role as nursing professionals has a clear visibility. According to the Canadian Nurses Association<sup>8</sup>, a quality practice environment for nursing underlies a set of requirements such as: respect, meaningful work, clarity of function, autonomy and involvement in the work environment, adequate staff and equipment, strong nursing leadership, management commitment to nurses and nursing, development and promotion opportunities, a collaborative team, open communication at all levels of the organization, and appropriate salaries and benefits. A quality practice environment, therefore, endows nursing with the ability to attract and retain a qualified team; reduce the risk of injury, lower absenteeism; have a more consistent client care with better results; and better quality of professional life and general well-being for nurses<sup>8</sup>.

Another dimension included in the concept under study that, in our opinion, was little addressed in this sample was *client and professional satisfaction*. Although it is not possible to separately analyze this dimension, similarly to other dimensions of the concept, Kutney-Lee and collaborators<sup>19</sup> point to a greater client and professional satisfaction when a set of requirements are met, namely a good practice environment, a mix of skills, and sufficient number of nurses providing care. Providing a healthy practice environment and an adequate level of nurses per unit allows clients to have a real perception of the quality of the nursing care provided. The dimension *safety and outcomes*, reported by the respondents, has been well studied, as can be seen by a number of studies<sup>9,14,17</sup>. The same can be said about the dimension *client safety and quality of care*, namely through the RN4CAST study<sup>4,23,28</sup>.

We verified that the nurses in our sample refer *workload* as one of the

dimensions of the concept, which is implicitly associated with the number of professionals per unit. Studies have shown that a reduced number of professionals and consequent increase in workload, associated with a poor working environment, lead to negative results among clients<sup>13</sup>. These results are also demonstrated by<sup>12</sup> that report a decrease of complications for clients as the number of nurse's increase, particularly at the level of nosocomial infections, falls, and failure to rescue.

**Conclusion**

The initial objective of this study was to identify the essential characteristics of the concept of Safe Nurse Staffing in Primary Health Care. The results obtained indicate that the central characteristics of Safe Nurse Staffing are well identified by the respondents and are in accordance with what is proposed by the literature, in particular<sup>16,3</sup>. Thus, this study allows concluding that, in a general way, the respondents are in tune with the concepts of Safe Nurse Staffing and with the research in the field. In spite of this, some dimensions of the concept were less explored by the respondents (namely the organizational environment, and the client and professional satisfaction dimensions).

However, the results obtained make us think these health professionals are endowed with knowledge that can facilitate and actively intervene in the clinical governance of the services they belong to, and contribute to an increase in the quality of nursing care. This, in turn, will enable the demand of proper nursing personnel levels on their services, which may create dynamic and innovative solutions that are adaptable to the evolutionary nature of the populations they attend to and the health environment. There is also an opportunity for training that facilitates the acquisition of new knowledge that may be applied in the field, particularly in team management.

The Order of Nurses argues that the proper nurse staffing, their qualification levels, and skill profile are fundamental aspects for achieving safety and quality of care for the target populations and for the organizations<sup>24</sup>. The present study contributes to this understanding and lays the groundwork for future investigations on the nurse care-sensitive health gains derived from Safe Staffing.

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