

Demystifying nursing staffing

Desmitificando el tamaño de enfermería

Desmistificando o dimensionamento de enfermagem

Elizene Pereira da Silva¹

ORCID: 0000-0002-6566-417X

Renato Philipe de Sousa^{1*}

ORCID: 0000-0002-6586-2205

Sarah Mendes de Oliveira

Muraoka¹

ORCID: 0000-0001-8374-9698

Leilane Mendes Garcia¹

ORCID: 0000-0002-8895-7143

Paolla Algarte Fernandes¹

ORCID: 0000-0001-8583-4140

Francielle Alves Marra¹

ORCID: 0000-0002-1682-0607

¹Centro Universitário Atenas.
Minas Gerais, Brazil.

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*Corresponding author:

r_marcciano@hotmail.com

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Abstract

This study aimed to demystify nursing staffing, elucidating the main difficulties faced by professionals in its implementation and highlighting the importance of effective planning to ensure the quality of care and the health of workers. This study adopted the bibliometric research method, using the Web of Science repository, and analysis considering Resolution No. 543/2017 of the Federal Nursing Council. Ten studies were selected, presenting a comprehensive view of nursing staffing in different care contexts, addressing various factors that influence this process, and pointing out solutions, management technologies, and good practices to improve the allocation of professionals. Flexibility in staffing approaches not only optimizes the use of available human resources but also contributes to reducing adverse events and promoting a safer and more efficient care environment.

Descriptors: Nursing Staffing; Patient Safety; Nursing Workload; Quality of Health Care; Human Resource Management in Health.

Resumen

El objetivo fue desmitificar el dimensionamiento de Enfermería, dilucidando las principales dificultades que enfrentan los profesionales en su ejecución y destacando la importancia de una planificación eficaz para garantizar la calidad de la atención y la salud de los trabajadores. Este estudio adopta el método de investigación bibliométrica, utilizando el repositorio Web of Science y el análisis a la luz de la Resolución nº 543/2017 del Consejo Federal de Enfermería. Se seleccionaron diez estudios que presentan una visión integral del dimensionamiento del personal de Enfermería en diferentes contextos de atención, abordando una variedad de factores que influyen en ese proceso, además de señalar soluciones, tecnologías de gestión y buenas prácticas para mejorar la asignación de profesionales. La flexibilidad en los enfoques de dimensionamiento no solo optimiza el uso de los recursos humanos disponibles, sino que también contribuye a reducir los eventos adversos y promover un entorno de atención más seguro y eficiente.

Descriptorios: Dimensionamiento del Personal de Enfermería; Seguridad del Paciente; Carga de Trabajo de Enfermería; Calidad de la Atención de Salud; Gestión de Recursos Humanos en Salud.

Resumo

Objetivou-se desmistificar o dimensionamento de Enfermagem, elucidando as principais dificuldades enfrentadas pelos profissionais na sua execução e destacando a importância de um planejamento eficaz para assegurar a qualidade do cuidado e a saúde dos trabalhadores. Este estudo adota o método de pesquisa bibliométrica, utilizando o repositório *Web of Science*, e análise à luz da Resolução n.º 543/2017 do Conselho Federal de Enfermagem. Foram selecionados dez estudos, cujos quais apresentam uma visão abrangente sobre o dimensionamento de pessoal de Enfermagem em diferentes contextos assistenciais, abordando uma variedade de fatores que influenciam este processo, além de apontarem soluções, tecnologias de gestão e boas práticas para aprimorar a alocação de profissionais. A flexibilidade nas abordagens de dimensionamento não apenas otimiza o uso dos recursos humanos disponíveis, mas também contribui para a redução de eventos adversos e para a promoção de um ambiente assistencial mais seguro e eficiente.

Descritores: Dimensionamento de Pessoal de Enfermagem; Segurança do Paciente; Carga de Trabalho em Enfermagem; Qualidade da Assistência à Saúde; Gestão de Recursos Humanos em Saúde.



Silva EP, Sousa RP, Muraoka SMO, Garcia LM, Fernandes PA, Marra FA institutions?" The objective of the study is to demystify nursing staffing, elucidating the main difficulties faced by professionals in its implementation and highlighting the importance of effective planning to ensure the quality of care and the health of workers.

Introduction

The quality of health care and effective human resource management are central aspects of health institutions, and in this context, nursing staffing becomes essential. Nursing staffing involves the strategic recruitment and distribution of professionals, considering both the quantity and the necessary qualifications, based on patient demands and the profile of the services offered. This process, in addition to promoting safety and quality of care, also aims to reduce health risks for both patients and nursing professionals, as they are frequently exposed to invasive procedures and other adverse factors^{1,2}.

In Brazil, Resolution No. 543/2017 of the Federal Nursing Council established minimum parameters for the staffing of nursing professionals in various sectors, seeking to ensure safe and efficient practice. These parameters provide fundamental technical guidelines for managers, helping them to adapt nursing teams to the real needs of services. The resolution emphasizes the importance of careful planning of working hours and the number of professionals, essential elements for quality and safe care³.

Nurses, as managers of human resources and care, play a central role in this process. They are responsible not only for planning and staffing, but also for promoting ongoing education, ensuring the health and well-being of team members, and ensuring excellent patient care. Appropriate staffing helps achieve these goals by providing a work environment that promotes the well-being of professionals and minimizes the risk of adverse events⁴.

However, the effective implementation of nursing staffing still faces significant challenges. Studies indicate that inadequate staffing is associated with an increase in the occurrence of adverse events, with a direct impact on patient safety and quality of care. In addition, work overload and stress resulting from poor staffing negatively influence the health and satisfaction of professionals. Therefore, it is necessary to discuss the difficulties faced in implementing staffing and the importance of adapting it to current standards^{4,5}.

Although nursing professionals recognize the importance of adequate staffing, many face barriers such as lack of technical knowledge, budgetary constraints, and limitations imposed by task delegation. In this sense, this study seeks to answer the following question: "Why is the nursing staffing method not properly implemented in health

Methodology

This study adopts the bibliometric research method, which allows the assessment of the state of science through the analysis of scientific production registered in specific databases. Bibliometric research allows the identification and quantification of the number of articles, patents, and citations on a topic, situating researchers about their scientific community⁶.

Data collection was performed using the Web of Science repository, accessed through the CAPES/MEC journal portal, with the keyword "Nursing Dimensioning". The inclusion criteria adopted for the selection of articles were publications in Portuguese, between 2017 and 2020, in peer-reviewed journals. These temporal parameters were established based on the publication of COFEN Resolution No. 543/2017³, which brought specific guidelines for dimensioning in Nursing, until the year 2020. The following exclusion criteria were considered: duplicate articles, pre-prints, and incomplete texts.

After applying the inclusion and exclusion criteria, 67 articles remained for analysis. Data analysis was carried out through documentary observation, a technique that allows the investigation of documents to obtain measurable information about the reality studied⁷. Document analysis involves the synthesis of knowledge, allowing the understanding of phenomena considering available evidence. The facts needed to be reported accurately and contextualized, so that the researcher could interpret them, synthesize information, identify trends and, whenever possible, make inferences⁸.

Results

The ten studies selected in Chart 1 present a comprehensive view of nursing staffing in different healthcare contexts, addressing a variety of factors that influence this process, in addition to pointing out solutions, management technologies, and good practices to improve the allocation of professionals. The analysis from these four perspectives is detailed below.

Chart 1. Selected studies. Paracatu, MG, Brazil, 2022

Article title	Authors	Year	Journal
Dimensionamento do pessoal de enfermagem em centro cirúrgico de um hospital universitário	Pedro, Danielli Rafaeli Candido; Oliveira, João Lucas Campos de; Tonini, Nelsi; Matos, Fabiana Gonçalves de O. Azevedo; Nicola, Anair Lazzari.	2018	Journal of Nursing and Health
Dimensionamento de enfermagem em unidade hospitalar de desintoxicação por abuso de drogas	Pedro DRC, Ribeiro DB, Sorriha MM, Tonini NS, Haddad MCFL, Oliveira JLC.	2018	Ciência Cuidado Saúde
Cultura de segurança do paciente, cuidados de enfermagem omitidos e suas razões na obstetrícia	Silva SC, Morais BX, Munhoz OL, Ongaro JD, Urbanetto JS, Magnago TSBS.	2021	Revista Latino-Americana de Enfermagem



Tempo de assistência e indicadores de qualidade em Unidades de Terapia Intensiva	Garcia PC, Tronchin DMR, Fugulin FMT.	2019	Revista Brasileira de Enfermagem
Dimensionamento de enfermagem em unidade de internação cirúrgica: estudo descritivo	Camila Vicente, Lúcia N. Amante, Luciana F. Sebold, Juliana B. ReisGironi, Tatiana Martins, Nádia C. Salum, Ana Rosete. Camargo R. Maia.	2021	Cogitare Enfermagem
Classificação de pacientes e dimensionamento de profissionais de enfermagem: contribuições de uma tecnologia de gestão	Vandresen L, Pires DEP, Lorenzetti J, Andrade SR.	2018	Revista Gaúcha de Enfermagem
Análise da ocorrência de incidentes notificados em hospital-geral	Figueiredo ML, Oliveira e Silva CS, Brito MFSF, D'Innocenzo M.	2018	Revista Brasileira de Enfermagem
Boas práticas para segurança do paciente em centro cirúrgico: recomendações de enfermeiros	Gutierrez LS, Santos JLG, Peiter CC, Menegon FHA, Sebold LF, Erdmann AL.	2018	Revista Brasileira de Enfermagem
Validação de Instrumento para fundamentar dimensionamento de Profissionais de Enfermagem em Alojamento Conjunto	Dini AP, Damasceno VF, Oliveira HC, Tanaka EZ, Padilha KM, Gasparino RC.	2020	Revista Brasileira de Enfermagem
Carga horária de trabalho: comparação dos métodos observacional e on-line	Somensi RM, Caregnato RCA, Cervi GH, Flores CD. Workload.	2018	Revista Brasileira de Enfermagem

The studies reflect a wide range of work settings, from surgical centers and detoxification units to intensive care units and rooming-in. Authors^{1,9}, for example, explore scaling in a surgical center, where the highly complex environment requires careful staffing. Researchers¹⁰, in turn, they study the obstetric context, demonstrating the importance of dimensioning in maternal and childcare units to ensure patient safety and quality of care. The variety of contexts addressed illustrates the importance of adjusting dimensioning according to the specificities of each health unit.

Several factors influence staffing, including patient demographic and clinical characteristics, workload, and quality indicators. Study¹¹ identified that the time of care and the severity of patients in Intensive Care Units directly affect the sizing needs. Authors⁹ point out that, in detoxification units, it is essential to consider the psychosocial factors of patients to adapt the number and profile of nursing professionals. Researchers⁴ highlight that the readjustment of personnel in surgical units contributes to the reduction of adverse events and to the improvement of patient safety, while other authors¹² associate sizing with incident control in general hospitals.

The use of management technologies for staffing is a strategy emphasized in some studies. The study discusses how the use of a technological tool for patient classification can assist in effective staffing and team organization¹³. This approach is corroborated by study¹⁴, which compare data collection methods to assess workload, suggesting that the choice of methodology influences the dimensioning and perception of overload. The incorporation of these technologies has the potential to optimize staff allocation and promote greater precision in adjusting the nursing staff.

Recommendations for good sizing practices are present in several studies, focusing on patient safety and care efficiency. Paper¹⁵ proposes a set of good practices for surgical centers, highlighting the role of Nursing in

implementing these safety measures. Researchers¹⁶ validate a specific instrument for sizing in joint accommodation, providing guidelines for adapting the team according to maternal and childcare demands. Authors⁴ reinforce the importance of adequate sizing to reduce the overload on professionals and ensure quality care, highlighting how the implementation of good practices can have a significant impact on both professionals and patients.

Discussion

Nursing staffing is a complex issue that goes beyond the mere allocation of professionals, involving critical issues of management, safety, and quality of care. The diversity of contexts in which the studies analyzed were conducted—ranging from surgical centers to detoxification and intensive care units—highlights the need for specific adaptations in staffing strategies. This need for adaptation is corroborated by research that shows that different health units have different demands and characteristics, making it essential that staffing be flexible and sensitive to these particularities^{1,9,10}.

Factors that influence staffing, such as demographic and clinical characteristics of patients, have a direct impact on workload and, consequently, on the quality of care. The literature highlights that the severity of cases treated in Intensive Care Units (ICUs) and the psychosocial context of patients in detoxification units should be considered when defining the number and profile of nursing professionals^{9,11}. Continuous readjustment of nursing teams is an effective strategy to mitigate adverse events and promote patient safety, highlighting the importance of a proactive approach in human resources management in health⁴.

The incorporation of management technologies, such as patient classification tools, emerges as an innovative solution to optimize sizing. Studies^{13,14} show that the use of technological methods for data collection and analysis can significantly contribute to the accuracy of sizing. The



adoption of these tools not only facilitates the organization of teams but also enhances the adaptation of care to the real needs of patients, promoting a safer and more efficient care environment.

Recommendations for good practices, outlined in several studies, emphasize patient safety and care efficiency as priorities in the sizing process. Study¹⁵ highlights that the implementation of safety measures in surgical centers requires active participation by the nursing team, while other authors¹⁶ validate instruments that guide the adequacy of teams in shared accommodation units. This evidence reinforces the idea that adequate staffing not only benefits health professionals by reducing workload and stress but also has a positive impact on the quality of care provided to patients⁴.

Furthermore, the barriers faced in implementing nursing staffing, such as budgetary constraints and lack of technical knowledge among professionals, require a multidimensional approach that involves ongoing training and awareness-raising on the importance of staffing. The training of competent managers, capable of understanding and applying the guidelines established by COFEN Resolution No. 543/2017³, is essential for the effectiveness of the sizing process in healthcare institutions. These barriers must be

Final Considerations

Nursing staffing is a fundamental element in ensuring the quality of healthcare and patient safety. The analysis of the reviewed studies shows that to be effective, staffing must be adaptable to the particularities of each healthcare unit, considering the characteristics of patients and specific care demands. Flexibility in staffing approaches not only optimizes the use of available human resources, but also contributes to reducing adverse events and promoting a safer and more efficient care environment.

The incorporation of management technologies and tools for patient classification emerges as a viable strategy to improve the staffing process. The use of real-time data and information allows healthcare managers to make assertive decisions, ensuring that the nursing team is appropriate for the profile of the patients being treated. In addition, ongoing training of healthcare professionals is necessary for the successful implementation of staffing guidelines, enabling nurses to understand and apply best practices in their work routines.

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