

The main competencies of nurses in offshore service: oil and gas platforms

Las principales competencias de las enfermeras en el servicio offshore: plataformas de petróleo y gas

As principais competências do enfermeiro no serviço offshore: plataformas de petróleo e gás

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Abstract

The aim was to describe the skills of an offshore nurse through theoretical modeling that aimed to clarify their main responsibilities on oil-related platforms. This is an integrative review research where, through materials available on digital platforms and books with the same theme, it will be possible to gather enough data to reflect and discuss the duties that are the responsibility of the offshore nurse. In the discussion, two categories were selected to understand the topic better: The insertion of the Nurse in management in the offshore service in search of promotion and prevention of workplace health and The skills of the offshore nurse in the face of urgent and emergency actions. This study found that the nurses' offshore work process is developed through the collaboration of a multidisciplinary and multidisciplinary team, where they have responsibilities in offshore work, and their presence on oil platforms serves as a professional example around worker health and safety.

Descriptors: Nursing; Petroleum; Occupational Health Nursing; Occupational Health; Extractive and Processing Industries.

Resumen

El objetivo fue describir las habilidades de una enfermera offshore a través de modelamiento teórico que tuvo como objetivo aclarar sus principales responsabilidades en plataformas relacionadas con el petróleo. Se trata de una investigación de revisión integradora donde, a través de materiales disponibles en plataformas digitales y libros con la misma temática, se podrá recopilar una cantidad suficiente de datos que tendrán como finalidad la reflexión y discusión de los deberes que corresponden al enfermera offshore. En la discusión se seleccionaron dos categorías con miras a una mejor comprensión del tema, tales como: La inserción del Enfermero en la gestión en el servicio offshore en busca de la promoción y prevención de la salud en el trabajo y Las habilidades del enfermero offshore en la cara de acciones urgentes y de emergencia. Este estudio encontró que el proceso de trabajo offshore de los enfermeros se desarrolla a través de la colaboración de un equipo multidisciplinario y multidisciplinario, donde tienen responsabilidades en el trabajo offshore, y su presencia en plataformas petroleras sirve como ejemplo profesional en el área de salud y seguridad.

Descriptoros: Enfermería; Petróleo; Enfermería del Trabajo; Salud Ocupacional; Industrias Extractivas y de Procesamiento.

Resumo

Objetivou-se descrever as competências de um enfermeiro offshore por meio de modelagem teórica que visou esclarecer suas principais responsabilidades em plataformas relacionadas ao petróleo. Trata-se de uma pesquisa de revisão integrativa onde através de matérias disponíveis nas plataformas digitais e livros com o mesmo tema tornará possível reunir uma quantidade de dados suficientes que terão como finalidade a reflexão e a discussão das atribuições que são da competência do enfermeiro *offshore*. Na discussão foram selecionadas duas categorias como visando melhor entendimento sobre o tema, tais quais: A inserção do Enfermeiro frente a gestão no serviço *offshore* em busca de promoção e prevenção de saúde dos trabalhos e As competências do enfermeiro *offshore* frente a ações de urgência e emergência. Este estudo constatou que o processo de trabalho *offshore* do enfermeiro se desenvolve por meio da colaboração de uma equipe multidisciplinar e multiprofissional, onde possui responsabilidades no trabalho *offshore*, e sua presença em plataformas de petróleo serve como exemplo profissional na área de segurança e saúde do trabalhador.

Descriptoros: Enfermagem; Petróleo; Enfermagem do Trabalho; Saúde Ocupacional; Indústrias Extrativas e de Processamento.



Introduction

Beyond hospitals and the primary healthcare system, a healthcare professional's workspace is much broader than the public is often led to believe. The nurse, in this multifaceted scenario, establishes a point of support in daycare centers, schools and companies, reinforcing the profile of health care, paving the way for advancement and merging disparate work processes¹.

The research aims to specify some of the main duties of the offshore Nurse, located on national oil and gas exploration platforms. The main competencies developed by nurses who work in this area involve planning, implementation, evaluation of programs that guarantee continuous actions, thus enabling health and safety at work and emergencies for workers².

The general objective of the study is to define the main characteristics of offshore nurses who work on oil and gas exploration platforms. The main competencies of a nurse working in this area include developing, implementing and evaluating programs to ensure the health and safety of employees in the workplace, both in the short term and in the event of an emergency³.

Offshore is an English term whose literal meaning is "far from the coast", which is why the nurse spends a period of 14 (fourteen) to 21 (twenty-one) days as the only healthcare professional working on oil and natural gas platforms. Given the complexity of this service, this area requires a healthcare professional with numerous courses, such as BLS and HUET. This is necessary because countless accidents occur because of recklessness, negligence and malpractice. A team of petroleum-related professionals who will receive training to respond to emergencies will be assembled under the direction of a professional nurse and will be called a "stretcher team"⁴.

When observing the existing scarcity in the academic exploration of nursing work, as well as the extremely limited exploration of the nurse's service on oil and gas platforms, the feasibility of developing an integrative review research project with an emphasis on the main responsibilities of the nursing profession was noted. health professional in this area.

In addition to this lack of information that generated the opportunity to carry out this project, there is personal motivation, which arose after a simple conversation between a former teacher and a student, and the lack of information generated an incessant curiosity.

The project's initial focus is to present to Nurses in training or already graduated the main functions of the Occupational Nurse who works on the platforms, promoting, implementing, and monitoring to bring health and well-being to themselves and other professionals present, bringing a good understanding of the subject and bringing a reflective look at this practice. In the scenario in question, the nurse is placed on a platform on the high seas, expanding the profile of health care, building its promotion, and integrating different work processes¹.

This research will be like a foundation bringing a critical and blurred look at the practices that are developing today and that still do not have full knowledge about their

The research meets the National Agenda of Health Research Priorities of the Ministry of Health, in agenda 18 Health Promotion, in item 18.1 magnitude, dynamics and understanding of diseases and events, centered in subitem 18.1.3 Validation and synthesis of knowledge and technologies health promotion products produced in the country and abroad⁵.

Nursing training at the undergraduate level must allow the cultivation of professional competence and maintain links with the policies and procedures of the World Health Organization (WHO). Enabling them to recognize and reflect, during their training, on the nurse's personality and the actions that promote patient health⁶.

This project will contribute to the presentation of this aspect of Nursing to students in the health area who do not yet know the broad areas in which the professional Nurse can work. In addition to the presentation, this article will also contribute to the elimination of doubts regarding the activities carried out by nurses on oil and gas platforms, adding the necessary courses for admission, and thus providing knowledge and information.

The objective was to present to health professionals the main responsibilities of a nurse who works in this area.

Methodology

This is an integrative review research, in which, through materials available in databases and books with the same theme, it was possible to gather enough data to reflect and discuss the responsibilities that belong to the offshore nurse competency.

To better understand the topic, we first addressed the regulatory standards available on the websites of the Ministry of Labor, the Federal Nursing Council, and the Brazilian Navy, thus bringing more clarity on the topic and standards that must be followed by the Nurse who will work there. After searching for the main contributions that nurses make on oil and gas platforms, the following databases were used: SciELO, LILACS and MedLine, providing the basis for the guiding questions: "What are the main duties of the offshore nurse?" and "What are the standards that regulate the work of nurses who work on board?"

Through DeCS/MeSH, the descriptors for the online search were drawn up: "Nursing", "Petróleo" and "Occupational Health", considering the research in the time frame from 2016 to 2021, also considered as an inclusion criterion publication in the form of articles, dissertations and master's theses, available in Portuguese in full-text.

It should be noted that the exclusion criteria established were unavailability of access, publications in more than one database, abstract, texts in the form of projects, in other languages, outside the time frame defined in the inclusion criteria and all articles that are not articulated to the theme.



Chart 1. Crossing of descriptors. Rio de Janeiro, RJ, Brazil, 2016-2021

Search strategy	Total	Filter	Selection	2016	2017	2018	2019	2020	2021
"Nursing AND Petroleum AND Occupational Health"	40	4	1	1	0	0	0	0	0
"Nursing AND Petroleum"	70	4	1	1	0	0	0	0	0
"Nursing AND Occupational Health"	5.674	12	2	0	0	2	0	0	0
"Petroleum AND Occupational Health"	369	8	3	2	1	0	0	0	0
Total	6.153	28	7	4	1	2	0	0	0

When carrying out the search, when using the strategy "Nursing AND Petroleum AND Occupational Health", 40 productions were found and only one met the requirements. But when using "Nursing AND Petroleum", 70 productions were found, of which only one met the inclusion and exclusion criteria and was selected.

In this way, the strategy "Nursing AND Occupational Health" was used, in which 5674 productions were highlighted and, through the filters, only two articles were selected; with "Petroleum AND Occupational Health", we located 369 productions, of which only four met the criteria.

In the second stage, the material was explored to find the recording units for expressions and significant words, aiming to classify and aggregate the data to reach the core understanding of the text in an organized and systematic way.

In the third stage, the articles that were selected for the integrative review were analyzed to verify their authenticity, methodological quality, importance of information and representativeness and, for this reason, a table was constructed, with the title of the work, total number of articles, number of filters applied, selected and the years referring to their publications.

In the fourth stage, it consisted of interpreting the results of the articles related to the research question, in which the analysis was carried out following the steps of Bardin's thematic analysis⁷, which is divided into three stages.

The first stage involved reading all the articles, to absorb the content, allowing the creation of the corpus, which validates the qualitative approach. Thus, it was possible to delimit the understanding of the texts, to highlight the units of records, as starting from the parts that identify with the study of the material made it possible to form thematic units, in which we codified and used the theoretical concepts raised for guidance. of the analysis in the stage.

In the second stage, the articles that were selected for integrative review are analyzed to verify their authenticity, objective, methodological quality, importance of information and representativeness, for this reason were constructed in Chart 2. In the third stage, with the analysis data, it was possible to articulate the theoretical framework, which led to the identification of the thematic unit.

According to the results found in the last stage, it was necessary to complement the research with articles outside the exclusion and inclusion criteria, thus supporting the discussion.

Results

The research selected articles and studies, which were fundamental for the discussion of the data, however, there was a limitation of few studies that addressed the central theme, in which it was necessary to expand the search to articles outside the time frame and gray literature, as per the chart below.

Chart 2. Structural framework of the studies captured. Rio de Janeiro, RJ, Brazil, 2016-2021

Studies selected within the time frame			
Title	Year	Journal	Authors
Riscos, agravos e adoecimentos entre trabalhadores atuantes em plataformas offshore: uma revisão integrativa	2020	Revista Eletrônica de Enfermagem	Bastos ILM, Faria MGA, Koopmans FF, Alves LVV, Mello AS, David HMSL.
Contribuições do enfermeiro offshore no gerenciamento dos riscos ocupacionais: aspectos inerentes à saúde do trabalhador	2018	Caderno de Graduação - Ciências Biológicas e da Saúde	Santos AM.
As dificuldades enfrentadas pelo enfermeiro do trabalho na prevenção de acidentes e doenças ocupacionais – revisão de literatura	2017	Rev. Cient. Sena Aires	Almeida RB, Silva RM, Moraes-Filho IM.
Ação inovadora de enfermeira do trabalho: causas e custos do absenteísmo entre profissionais da saúde numa empresa petrolífera	2016	Universidade do Estado do Rio de Janeiro	Vilela PF.
Studies selected outside the time frame			
Title	Year	Journal	Authors
Atuação do enfermeiro do trabalho na saúde e proteção dos trabalhadores offshore	2015	Inova Saúde	Jesus C, Oliveira F, Rocha M, Nascimento R.
Onboard nurse on oil platforms: an offshore experience report	2013	Texto & Contexto - Enfermagem	Amorim GH, Guedes MAS, Guedes CCP, Aguiar BGC.
Discutindo e refletindo sobre a competência do enfermeiro offshore	2012	Revista Enfermagem UERJ	Guedes CCP, Aguiar BGC.



Gray literature			
Title	Year	Source	Authors
Norma regulamentadora NR 32: segurança e saúde no trabalho em serviços de saúde	2011	Portaria GM n.º 1.748	Ministério do Trabalho e Emprego.
Normas da Autoridade Marítima para embarcações empregadas na navegação de mar aberto – NORMAM-01/ DPC	2005	Diretoria de Portos e Costas	Marinha do Brasil.
Norma regulamentadora NR 30: segurança e saúde no trabalho aquaviário	2002	Portaria da Secretaria de Inspeção do Trabalho n.º 34	Ministério do Trabalho e Emprego.

Aiming to meet the study objective, 04 were included within the time frame, from the years 2020 (01); 2018 (01); 2017 (01) and 2016 (01) and 03 outside the 2015 cutoff (01); 2013 (01) and 2012 (01). Concerning gray literature, 03 were captured referring to government documents, from the years 2011 (01); 2005 (01) and 2002 (01).

Under Law No. 5,811 of 1972, which provides guidelines for work in continuous shift and on-call shift regimes, intended for the oil and gas industry, the Regulatory Norms of the Ministry of Labor, such as the updated NR 30⁸, which regulates the safety and health conditions of waterway workers, and NR 32⁹, which establishes basic guidelines for the introduction of safety and health measures for health service workers, the Maritime Authority Standards (NORMAM-01)¹⁰ which establishes that: every platform, for its safe operation, must have a minimum number of crew members associated with a qualitative and quantitative distribution, for safe work, called safety crew and also, “establishes the obligation of the presence of the nursing professional in the Health Section of maritime units”.

The evolution of industrial sectors, such as the chemical and shipbuilding industries, is linked to the oil industry. Therefore, the oil industry changes society's way of living, involving certain services, areas of work and consumer goods. The oil industry generates a job market far from the continental coasts, carried out by multidisciplinary teams, in interdisciplinary work, and with workers from multinationalities in risky services, given the complexity of this type of extraction⁶.

Installations such as those mentioned above pose many risks of workplace accidents, such as hearing problems due to loud noises, burns due to excessive heat, and injuries that can lead to disability due to the incorrect use of work tools. There are also risks of biological rhythm disorders such as insomnia due to shift work, and a wide range of psychological factors such as anxiety, depression, and panic disorder arising from the confinement regime on the high seas and the lifestyle they live there¹¹.

In the units mentioned above, there is an occupational health and safety team that aims to ensure worker safety as well as the services provided. In this health and safety team, the nurse is the only health professional, and in certain emergency cases, he leads a care group that helps bring safety and well-being in the face of that situation.

Given the lack of updated materials on this aspect, the research will thus bring out the main responsibilities of the Nurse who is on this platform, bringing safety and well-being to the workers who live there.

Discussion

Occupational nursing is seen as a profession, designed to provide care and attention to workers, regardless of the role they perform. Their health and safety are essential so that they can carry out their activities safely on a daily basis¹².

The occupational nurse must be familiar with the specificities of each type of organization in which they work to adequately formulate a situational diagnosis. On oil platforms, for example, the work environment is organized and functions in a similar way to that of a city to provide all the support that workers need, even if it is chaotic, dangerous, complex, communal, permanent, and confined¹¹.

The nurse is responsible for carrying out activities related to developing preventive strategies and improving working conditions, making use of administrative elements, and managing everything so that the offshore healthcare team achieves its objective of providing high-quality care to all patients, enhancing the knowledge of local workers, and disseminating information of great importance for a better stay in the environment¹⁰.

An accident at work is a negative and unwanted situation that causes physical and/or financial damage (loss of value). Physical damage can be immediate or over time, for example, an occupational illness caused by repetitive movements. Damage material can be seen as a situation that causes financial losses and, therefore, includes variables that can generate a decrease or increase in productivity⁶.

The nurse is responsible for inspecting the condition of workers' protective equipment based on NR6, for which the company is obliged to provide this risk-appropriate equipment free of charge, which must be in perfect condition and functioning⁹.

However, the responsibilities of the occupational health nurse include everything related to the worker's health, including the nurse's behavior during care and the measures adopted to prevent accidents and illnesses in the workplace.

When major accidents happen, it is everyone's top priority to minimize casualties. This means everyone at work has some responsibility for mitigating potential hazards, including those related to physical and chemical hazards, biological hazards, and ergonomics.

In emergencies, the nurse is the only healthcare professional on board and leads the rescue team, called the stretcher team, the healthcare professional plays a crucial role in initial care. Therefore, a call center is used, whether by telephone or videoconference, to dispute the need for health care. The onshore doctor guides treatment and



prescribes prescriptions for the platform and, if necessary, summons an external rescue group that goes by helicopter to the location¹¹.

The stretcher team consists of professionals from different areas who develop knowledge to provide safety and protection and have a coordinated approach to always provide the best care for workers in this area. The nurse is the only healthcare professional on this team and, in critical situations, leads a group of employees known as the stretcher team, which is equipped for emergency action⁴.

The skills of the nurse in the offshore service are focused on the health of the worker on board, however, there are still private services in which this professional is on land and passes on information on how to proceed to the team of nursing technicians on the high seas, which requires training. efficient and specialized, but the laws are still being formed, although in practice it is not a new service, therefore, I hope that through the government's political will, the skills will become more aligned.

Final Considerations

This study found that the nurses' offshore work process is developed through the collaboration of a multidisciplinary and multidisciplinary team, where they have responsibilities in offshore work, and their presence on oil platforms serves as a professional example in worker health and safety. The worker also serves as the sole maritime health professional. Work is set for 14 or 21 days at sea.

It is understood that it is essential that the working nurse can evaluate, plan, and execute the risks present in the work environment. The health professional is essential as they will support the continuing education necessary for worker safety on the platform, which is characterized by processes of productive restructuring, makes decisions and coordinates, thus recognizing the needs of workers. As a result of their decisions, they must mitigate risk behaviors, eliminate them, and adopt appropriate and effective attitudes.

The nurse's actions are also supported by the relationship established with the doctor's external assistance, via telephone or videoconference, so that the therapy can be carried out. Therefore, this nurse must carry out the diagnosis of the disease competently, using his technical knowledge, practical skills, and ethical attitude in providing care to the worker.

Oil and gas platforms are a unique workplace, highly profitable economically, and, in a way, guarantee social prestige. However, the disadvantage of working alone and under close supervision for long periods, day or night, is the extreme stress this work can cause.

The study's limitation was the limited literature that addressed in depth the skills of nurses in the offshore service, so much so that it was difficult to get involved in professional practice, which suggests the relevance of the topic and the need for more productions. scientific studies that address various aspects of offshore service.

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