

EVALUATION OF THE NURSING PROCESS IN CARE OF PATIENTS WITH COVID-19 IN REFERENCE HOSPITALS

AVALIAÇÃO DO PROCESSO DE ENFERMAGEM NOS CUIDADOS COM PACIENTES COM COVID-19 EM HOSPITAIS DE REFERÊNCIA

EVALUACIÓN DEL PROCESO DE ENFERMERÍA EN LA ATENCIÓN A PACIENTES CON COVID-19 EN HOSPITALES DE REFERENCIA

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Objective: to evaluate how the nursing process has been developed in the health care of patients with COVID-19, in the Reference Hospitals of the state of Rio Grande do Norte. **Method:** cross-sectional, descriptive-exploratory study, with a quantitative approach, conducted with 55 nurses from 11 reference hospitals for COVID-19. The *Snowball* technique and an *online* form have been used. In the analysis and interpretation of the data, simple descriptive statistics was used. **Results:** of the total, 43.6% (n=24) of the nurses were able to perform the nursing process. The investigation was the most frequently performed stage (45.4%-n=25). Difficulties in performing the phases of the nursing process were reported by 83.6% (n=46). The nursing care implementation step was the most challenging (36.3%-n=20). **Conclusion:** the nursing process is still a fragility of the profession, since its phases are interrelated and successive, and the break of this cycle compromises the effectiveness of the care provided.

Descriptors: Nursing. Nursing Process. Coronavirus Infections. SARS Virus.

Objetivo: avaliar como tem sido desenvolvido o processo de enfermagem na atenção à saúde dos pacientes com COVID-19, nos Hospitais de Referência do estado do Rio Grande do Norte. *Método:* estudo transversal,

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descritivo-exploratório, com abordagem quantitativa, realizado com 55 enfermeiros de 11 hospitais de referência para COVID-19. Utilizou-se a técnica Snowball e um formulário on-line. Na análise e interpretação dos dados utilizou-se a estatística descritiva simples. Resultados: do total, 43,6% (n=24) dos enfermeiros conseguiram realizar o processo de enfermagem. A investigação foi a etapa realizada com mais frequência (45,4%; n=25). Dificuldades na realização das fases do processo de enfermagem foram relatadas por 83,6% (n=46). A etapa de implementação da assistência de enfermagem foi a mais desafiadora (36,3%; n=20). Conclusão: o processo de enfermagem ainda é uma fragilidade da profissão, visto que suas fases são interrelacionadas e sucessivas e a quebra desse ciclo compromete a efetividade do cuidado prestado.

Descritores: Enfermagem. Processo de Enfermagem. Infecções por Coronavírus. Vírus da SARS.

Objetivo: evaluar cómo se ha desarrollado el proceso de enfermería en la atención a la salud de los pacientes con COVID-19, en los hospitales de referencia del estado de Rio Grande do Norte. Método: estudio transversal, descriptivo-exploratorio, con enfoque cuantitativo, realizado con 55 enfermeras de 11 hospitales de referencia para el COVID-19. Se utilizó la técnica de bola de nieve y un formulario en línea. En el análisis e interpretación de los datos, se utilizó la estadística descriptiva simple. Resultados: del total, el 43,6% (n=24) de los enfermeros fueron capaces de realizar el proceso de enfermería. La investigación fue la etapa más frecuentemente realizada (45,4%; n=25). Las dificultades para realizar las fases del proceso de enfermería fueron señaladas por el 83,6% (n=46). La etapa de implementación de los cuidados de enfermería fue la más desafiante (36,3%; n=20). Conclusión: el proceso de enfermería sigue siendo una fragilidad de la profesión, ya que sus fases están interrelacionadas y son sucesivas y la ruptura de este ciclo compromete la eficacia de los cuidados prestados.

Descriptor: Enfermería. Proceso de Enfermería. Infecciones por Coronavirus. Virus del SRAS.

Introduction

From the perspective of identifying the strategies that the nursing team has used to perform their work processes, especially with regard to direct patient care, the nursing process (NP) emerges to direct such performance, as it is a work system used by nurses to provide care. This process is the core of the activity of this professional, indicates a specific practice and presupposes the use of various technologies for its development⁽¹⁾.

The NP is developed in five phases that follow and are interrelated: investigation, in which the physical examination and anamnesis of the patient is performed and, together with clinical reasoning, offers subsidies for the nursing diagnosis that, in turn, indicates the need to plan the actions that will be performed, from materials, inputs and personnel that will be necessary, so that the responses to health needs are adequate and effective; the next phase is the implementation of programmed actions. Afterwards, there is the evaluation of the whole process carried out and of the patients' responses to the care provided; the whole cycle restarts⁽²⁻³⁾.

The COVID-19, caused by the SARS-COV-2 virus, on March 11, 2020, was characterized

by the World Health Organization (WHO) as a pandemic⁽⁴⁾. COVID-19 is a respiratory syndrome, however its symptoms are nonspecific and disease presentation can vary, including from no symptoms (asymptomatic) to severe pneumonia and death. Among the main complications are pneumonia, acute respiratory distress syndrome, acute heart injury, neurological manifestations such as stroke, and secondary infections, which require intensive treatment for many patients. These complications occur mainly in patients who have comorbidities, such as systemic arterial hypertension, diabetes, and immunodepression⁽⁵⁻⁶⁾. The clinical picture and the characteristic of high transmissibility (which can occur through the air, surfaces and contact) and contagion require the participation of qualified health professionals to act in this new pathology, which still challenges science and health system⁽⁶⁻⁷⁾.

The Nursing, as a professional field that has the nurse and his team in the front line of health care for people affected by COVID-19, has been a protagonist in the care. Not only because of the number of professionals in activity, accounting for more than half of the health workforce, but

also because of the excellence of a profession of higher education, it acts on several fronts in the fight against the pandemic⁽⁷⁻⁸⁾.

In this sense, this study is justified because it recognizes the need to discuss this theme, which is so relevant and of utmost importance for the development and autonomy of nursing professionals, as well as to promote greater professional recognition and quality of care, and also because it is mandatory to implement the NP in all health services, according to Resolution 358/2009 of the Federal Council of Nursing⁽⁹⁻¹⁰⁾.

Given this context, the question is: How has the nursing process (NP) been performed in the health care of patients with COVID-19, in the Reference Hospitals of the state of Rio Grande do Norte?

The study is relevant from the perspective of contributing to the evaluation of the NP, as well as to the identification of potentialities and weaknesses in its stages in face of the thinking and doing of nurses in a context of health crisis, enabling the diagnosis and the possible direction for the development of actions to train the team, so that it can overcome the problem.

Thus, the objective is to evaluate how the nursing process has been developed in the health care of patients with COVID-19, in the Reference Hospitals of the state of Rio Grande do Norte.

Method

This is a cross-sectional, descriptive-exploratory study, with a quantitative approach⁽¹¹⁻¹²⁾, conducted in 11 Reference Hospitals for COVID-19 in the state of Rio Grande do Norte (RN), Brazil. This state is located in the Brazilian Northeast and has a population of 3,168,027 inhabitants, distributed in 167 municipalities that occupy an area of 52,796.791 km², resulting in a density of 65 inhabitants/km²⁽¹³⁾.

It was carried out in hospitals referenced for the treatment of COVID-19 in the public network of the state, according to the Regional Units of Public Health (URSAP), which, in their jurisdiction, are divided into six: I URSAP – São

José de Mipibu; II URSAP – Mossoró; III URSAP – João Câmara; IV URSAP – Caicó; V URSAP – Santa Cruz; VI URSAP – Pau dos Ferros; and the Greater Natal⁽¹⁴⁾.

According to the National Registry of Health Establishments⁽¹⁵⁾, the state has 606 nurses. For this research, the expected sample size was 10% of this public. For inclusion purposes, the criteria were established: to be a nurse and work in the COVID-19 sector of a Referred Hospital for the treatment of COVID-19 of the public network of the state of RN. The exclusion criterion was being a nurse, but not working in direct patient care.

The sampling technique used by the research was the *Snowball*. This type of technique, also known as chain of references, is based on the referral of an individual⁽¹⁶⁾. The process began with a certain number of seeds (the name given to the key informant) selected by convenience. An electronic form was used for data collection. The link to access this form, as well as the invitation, was forwarded to the hospital professionals with whom the research team was closest. It was requested to be forwarded to the digital groups of the hospitals where they worked and to their professional colleagues who met the research inclusion criteria. Thus, a nurse was selected from each region and asked to divulge the research in the nurses' social network groups at the hospitals where they work.

This sampling technique is used, when the research is aimed at populations that are difficult to reach. The isolation and social distancing decreed in the state of RN since March 2020 make the nurse of the reference hospitals practically inaccessible, besides the fact that it is not recommended that the researchers enter the places, due to the risk of contamination and dissemination of the virus by the research team.

It was used as an instrument for data collection the online electronic form technology made possible through Google Docs. This application allowed the creation of an individual form composed of questions related to the research objective and of easy and quick access by the participating subjects. The instrument

was built based on the NP, its stages, difficulties and facilities in developing them at a time of pandemic, on which the possible answers were “Agree”, “Disagree” and “Neither agree nor disagree”, in addition to data on location, employment relationship and time of work. The collection took place between July 2 and September 30, 2020.

The data were analyzed and interpreted by means of simple descriptive statistics, presented in frequency and percentage with the help of *Microsoft Office Excel* 2010 spreadsheet editor and presented in tabular form. To compile the collection, the data were tabulated in the following order: transcription of the data in an Office Excel spreadsheet; grouping of responses; ordering of the data by topics; and construction of tables for the best presentation and interpretation of the results, discussing the findings with the pertinent literature.

This research was approved by the Ethics and Research Committee (CEP) of the Universidade Estadual do Rio Grande do Norte, under Opinion no. 4,095,569, Certificate of Ethics Appreciation Presentation (CAAE) 33311420.2.0000.5294

Results

Fifty-five individuals participated in the study, which corresponds to 9.0% of the total (n=606) of nurses working in reference hospitals for COVID in RN. Among the study participants,

87.2% (n=48) were female and 12.7% (n=7) were male. Of the total subjects who answered the survey, 83.6% (n=46) had 0 to 5 years of service time in the health institution. Regarding the number of jobs, the majority 76.3% (n=42) worked in more than one place. About the employment relationship, 64.8% (n=35) were permanent, that is, had statutory contracts and stability, while 27.8% (n=15) were provisionally hired by the state to work during the pandemic. The remaining 7.4% (n=5) had other types of contracts, such as commissioned position and cooperative etc.

Regarding COVID-19 infection, mostly 63.6% (n=35) responded that they were not infected, 18.1% (n=10) were infected, and 18.1% (n=10) did not know because they were not tested. Of the total, 90.9% (n=50) responded that they have worked with other nurses diagnosed with COVID-19. In addition, 92.7% (n=51) have worked with professionals from other areas who had been infected.

About the place of work of these professionals in the pandemic scenario, 65.4% (n=36) worked in intermediate care and 34.5% (n=19) worked in intensive care. Within these spaces, 43.6% (n=24) reported that they had been able to perform the EP, while 30.9% (n=17) were not able to perform it in its entirety, while 29.6% (n=14) did not make their position clear.

Regarding the stages of NP most frequently performed by the research subjects, the findings can be seen in Table 1.

Table 1 – Stage of the nursing process performed most frequently by nurses in the health care of patients with COVID-19. Pau dos Ferros, Rio Grande do Norte, Brazil – 2020. (N=55)

Variables	n	%
Investigation (Anamnesis and physical examination)	25	45.4
Nursing Diagnostics	3	5.4
Planning the expected results	6	10.9
Implementation of nursing care (Nursing prescription)	15	27.2
Evaluation of Nursing Care	6	10.9

Source: Created by the authors.

In addition, they were asked about the presence of difficulty in performing the phases of the NP. In this question, it was observed that 83.6% (n=46) answered affirmatively and

16.2% (n=9) did not report this difficulty. In the sequence, it was questioned which step professionals considered more challenging. Thus, Table 2 shows the frequency of responses.

Table 2 – Stage of the nursing process most challenging for nurses in the health care of patients with COVID-19. Pau dos Ferros, Rio Grande do Norte, Brazil – 2020. (N=55)

Variables	n	%
Investigation (Anamnesis and physical examination)	6	10,9
Nursing Diagnostics	12	21,8
Planning the expected results	12	21,8
Implementation of nursing care (Nursing prescription)	21	38,2
Evaluation of Nursing Care	4	7,2

Source: Created by the authors.

Discussion

The results pointed out that, as in most nursing practice scenarios, in this field of practice the female gender persists with predominance. The research “Nursing Profile in Brazil” makes it known that the category of nurses consists of 86.2% of women⁽¹⁷⁾. Regarding the time of work in the institution, most professionals who participated in this research showed to have less than five years of employment. This amount of time can be understood based on two main aspects: the fact that the state recently held a public tender and the temporary hiring of professionals to work in the pandemic. In this context, it is verified the placement of recently hired or sworn-in professionals in charge of the assistance at a time when it is distant from the reality in these environments.

Regarding work bonds, the study observed a very high percentage of workers who worked in more than one institution, assuming more than one scale. This fact, associated with the complexity of the work of nurses in the COVID-19 ward, that is a recent disease, still without an established treatment and that demands intensive attention from the professional, can cause several problems for the worker, such as stress and Burnout syndrome. These difficulties can also extend to the health care provided to patients, considering the work overload of these professionals⁽¹⁸⁾. Besides these factors, one can also think about the possibility of cross-infection, in which the professional, when infected, can transmit COVID to another environment in which he/she also works. Therefore, it is emphasized

that the performance and the work situation of health workers are central elements in facing the pandemic⁽¹⁹⁾.

Although health professionals, especially those who work in hospital care, have become a risk group for contracting COVID-19, due to the close handling and performance of procedures that disperse aerosols, only a small percentage reported having had the disease. On the other hand, most attested having worked with nurses and colleagues from other professions (physical therapist, physician) who became infected⁽²⁰⁻²¹⁾, which can also be caused by low testing, problems regarding the effectiveness of tests, performance of only rapid tests, with high occurrence of false negatives, and other associated factors.

Among the sectors of the COVID ward, the concentration of nurses in intermediate care or attention to clinical beds is higher because this is the space in which the number of beds is also higher. According to *Regula-RN*, the agency responsible for bed regulation in the state, 285 beds are of this type, while there are 199 critical beds of intensive care⁽²²⁾.

The NP is a specific professional activity, which requires a series of interrelated actions based on technical-scientific knowledge and historical-cultural values of the nursing professional. It is worth mentioning the participation of the nursing technician and nursing assistant, who are also protagonists in the development of the NP, especially in the implementation and the assessment phases, always under the guidance and supervision of the senior nursing professional. The recognition of the importance of the NP for the profession is evidenced in the

legislation instituted by class entities⁽²³⁾. Thus, it is noteworthy that, to reinforce the importance and need to plan nursing care, Resolution No. 358/2009 of the Federal Council of Nursing, provides for the Systematization of Nursing Care and the implementation of the Nursing Process (NP) in a deliberate and systematic way in public or private settings where care provided by nursing professionals occurs.

The NP brings quality and systematization to the assistance and care to the user, besides representing the autonomy of nurses in their work. Thus, it represents the nurses' own body of knowledge, which should be assumed, developed, consolidated, and valued. Thus, its non-implementation directly affects these aspects in a negative way, as well as its inadequate application is frontally related to the fragmentation of care⁽²⁵⁾.

From the perspective that the work of nurses is organized based on the NP, the Investigation stage, which includes the physical examination and anamnesis, was indicated in this study as the most performed by nurses. As the first stage, it is primordial for the development of the entire work process, because without it, there is no way to point out signs, symptoms and needs presented by the user⁽¹⁾.

In this study, the fragmentation of the professional's work was clearly perceived when we observed the different percentages of answers regarding the NP. This situation is similar to the findings of another study on the facilities and challenges of nurses in care management, in which the data indicated that the EP was used in some of their activities partially or completely⁽²⁵⁾. It should be inferred that the good quality of care is impaired, since the management of care is sequential, not isolated and dynamic⁽²⁾.

About the findings, the stage of nursing diagnoses presented the lowest frequency of execution. It was observed that, since there was a need for greater accuracy in clinical reasoning, the main difficulty would be precisely the little technical-scientific knowledge to identify the patient's needs. Moreover, the records, articles, protocols and continuing education about

COVID-19 are still incipient for the usual nursing practice, requiring updating by the professionals. It would also be important the efficient offer of continuing education by the services, reinforcing that, as pointed out earlier, a good part of the professionals who are in direct confrontation to the pandemic have less than 5 years in those environments.

It is worth emphasizing that tracing Nursing Diagnoses (ND) in patients with COVID-19 is fundamental to offer holistic care, focused on all human needs. Likewise, updating these diagnoses is necessary with each new evaluation, since the patients' health status is not stable, favoring changes in the needs of these individuals⁽²⁶⁾.

Although the fact that nurses had difficulties to perform some steps of the NP is worrying, it can be inferred that, if this process was not being carried out satisfactorily, as pointed out by the research data, nursing care and assistance were impaired. In a study on the NP, in the view of nursing professionals, it was clear that, despite the receptivity of professionals for its development and implementation in the institution, the team's knowledge was still scarce, requiring further study on the subject through reading, research, workshops and approximation with other successful experiences⁽²⁷⁾.

This way, among the causes for the non-performance or inadequate performance of the NP, studies point out difficulties, such as training for the development of the NP, because, since the nurse's training, there are gaps in the application of all its phases in hospital institutions, in addition to lack of adequate record of nursing care, role conflict, difficulties in accepting changes, lack of credibility in nursing prescriptions, mechanics of routine tasks, work demand, lack of institutional support, lack of professionals, overload and inadequate working conditions for nurses, lack of support from nursing management, among others⁽²⁸⁻²⁹⁾.

Thus, many difficulties can directly contribute to the non-applicability of the NP in all its stages or even to the inconsistency of some of them, and the pandemic scenario is another factor to be added. In the specific case of this research,

the difficulties could also be attributed to the fact that, besides being a new pathology, a good number of the nurses were hired to work in this pandemic situation and did not have a technical-scientific approach to the practice.

The nurses also pointed out that the most challenging stage of the NP, when caring for patients with COVID-19, is implementation. In practice, all the difficulty of performing the NP, especially in its initial stages, ends up in the implementation as the biggest challenge, followed by planning and diagnosis, which corroborates the previous statement.

Similarly to the difficulties pointed out, the implementation poses several challenges, because it is in this phase that technical and scientific knowledge, quantity of professionals, and inputs, such as personal protective equipment, pads, sheets, etc., basic items for the effectiveness of the prescribed care, are required. However, this is when the lack of these materials occurs the most.

In the study entitled "Nurses' Perceptions on the Nursing Process: An Integration of Qualitative Studies", the authors state that most nurses do not fully apply the NP and, when they do, they most often use the nursing history and evolution, but report not being able to record these activities⁽³⁰⁾.

Therefore, it is noteworthy that institutions need to offer subsidies for the effectiveness of the NP, since it should also be reflected by the service. Thus, without the necessary conditions, such as a work environment that offers the indispensable tools for care, adequate staff dimensioning, as well as continuing education as a pillar for updating the professionals who work in that reality, nurses will not be able to effectively perform the entire NP.

The limitation of this study is the low number of subjects and the fact that it was conducted only online, with self-reported information, making it impossible to check the information provided.

Based on what has been presented, this study contributes to the visualization about the NP in hospitals in RN, because it points out weaknesses that need to be overcome, since it is through

this process that nurses have the autonomy to perform their work effectively and satisfactorily.

Conclusion

The nurses of the State Reference Hospitals for treatment of COVID-19 have developed the NP with weaknesses. However, as the phases of this process are interrelated and successive, the break of this cycle compromises the effectiveness of the care provided. According to the findings, the most performed stage of the NP is the investigation, which begins with the anamnesis and physical examination. Although they state difficulties in carrying out the process, the implementation stage was pointed out as the most challenging.

In this sense, we highlight the need for actions to strengthen the NP, such as the improvement of professionals, the encouragement and appreciation by managers, the population and the service, and the encouragement, in the curricula, to train new professionals focused on the NP. In addition, it is necessary to promote further research on the subject in order to expand the knowledge about the current scenario and propose new nursing interventions to overcome the challenges

Colaborations:

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