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INTEGRATIVE LITERATURE REVIEW

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Contributions of the Nursing Care Systematization to the Chronic Kidney Patient: An Integrative Review

Contribuições da Sistematização da Assistência de Enfermagem ao Paciente Renal Crônico: Revisão Integrativa

Las Contribuciones de la Sistematización de Asistencia en Enfermería del Paciente Renal Crónica: Revisión Integradora

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ABSTRACT

Objective: The study's purpose has been to analyze the contributions of the Nursing Care Systematization (NCS) with regards to the care provided to the chronic renal failure-bearing patient, and then identifying the main nursing diagnoses found. **Methods:** It is an integrative literature review that was carried out at the databases/libraries, namely, *MEDLINE*, *LILACS*, *SciELO* and *BDENF*. This research followed the methodology comprised by six stages as proposed by Lawrence H. Ganong. **Results:** 15 articles were included in this study. They emphasized that the NCS is a study-based importance instrument, which has a direct impact on the patient safety. The studies also showed the following as the main nursing diagnoses: risk of infection, activity intolerance, risk of ineffective renal perfusion and altered sleep pattern. **Conclusion:** Notwithstanding the prominent NCS importance, though in a controversial way, the workers do not have enough knowledge and do not demand enough personnel to perform the work adequately in the nephrology services due to work overload.

Descriptors: Nephrology, Nursing, Nursing Processes, Care.

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RESUMO

Objetivo: Analisar as contribuições da sistematização da assistência de enfermagem (SAE) no cuidado prestado ao paciente com Insuficiência Renal Crônica, identificando os principais diagnósticos de enfermagem encontrados. **Método:** foi realizado uma revisão integrativa de literatura, nas bases/bibliotecas de dados MEDLINE, LILACS, SciELO e BDEF. Seguindo a metodologia composta por seis etapas, proposta por Lawrence H. Ganong. **Resultados:** obteve-se 15 artigos que compuseram na íntegra esta pesquisa. Os quais destacaram que a SAE é um instrumento de importância fundamentada nos estudos, que impacta de maneira direta na segurança do paciente. Trazendo ainda como principais diagnósticos de enfermagem: Risco de infecção, intolerância a atividade, risco de perfusão renal ineficaz e padrão de sono alterado. **Conclusão:** apesar da importância destacada da SAE, de maneira controversa, os trabalhadores não possuem conhecimento suficiente e não demandam de pessoal o suficiente para exercer a de maneira adequada nos serviços de nefrologia, devido à sobrecarga de trabalho.

Descritores: Nefrologia, Enfermagem, Processos de Enfermagem, Cuidado.

RESUMEN

Objetivo: Analizar las contribuciones de la sistematización de la asistencia de enfermería (SAE) en el cuidado prestado al paciente con Insuficiencia Renal Crónica, identificando los principales diagnósticos de enfermería encontrados. **Método:** se realizó una revisión integrativa de literatura, en las bases / bibliotecas de datos MEDLINE, LILACS, SciELO y BDEF. Siguiendo la metodología compuesta por seis etapas, propuesta por Lawrence H. Ganong. **Resultados:** se obtuvieron 15 artículos que compusieron en la integración de esta investigación. Los cuales destacaron que la SAE es un instrumento de importancia fundamentada en los estudios, que impacta de manera directa en la seguridad del paciente. Tratándose además como principales diagnósticos de enfermería: Riesgo de infección, intolerancia a la actividad, riesgo de perfusión renal ineficaz y patrón de sueño alterado. **Conclusión:** a pesar de la importancia destacada de la SAE, de manera controvertida, los trabajadores no poseen conocimiento suficiente y no demandan de personal suficiente para ejercer la adecuada en los servicios de nefrología, debido a la sobrecarga de trabajo.

Descriptores: Nefrología, Enfermería, Procesos de Enfermería, Cuidado.

INTRODUCTION

The Nursing Care Systematization (NCS) is an area of great prominence in the field of research currently due to the contributions generated for health workers and especially for patients. This is justified by the increase in the level of care provided by the NCS, helping the nursing team in the attribution and performance of their tasks and benefiting the patient through an individualized and quality care.¹

For proper implementation of the NCS, it is necessary for nursing professionals to have the knowledge and to perform what is exposed in the code of ethics of their profession, assuring the patient quality assistance and assuring their rights.¹ To facilitate the implementation and regulation of the NCS, the *Conselho Federal de Enfermagem (COFEN)* [Federal Nursing Council], through the Resolution No. 358/2009 from the *COFEN* with regards to the NCS, stipulated this as a mandatory approach for nursing professionals, describing the role of each professional, nurses, nurse technicians and

nursing auxiliaries in order to perform the activities and the process.²

One factor to be emphasized is the importance of not carrying out NCS in isolation, considering that in order to obtain the result expected by NCS, it is necessary to have: human resources, correct dimensioning of the nursing team to execute NCS in its fullness; nursing process, being the method by which we perform the NCS and finally the instruments, which are the materials we need for such execution.³

If in the older field areas the implementation of NCS already presents difficulties, in relatively new areas this difficulty tends to be even greater, due to the inexperience of the professionals with the field and the lack of knowledge about the importance of the same. However, in a controversial way, in these new fields, the NCS is even more important, to help in the evolution and organization of the area. Corroborating with such ideas, we highlight in this study the implementation of NCS in the area of nephrology, this aiming at the various benefits that can be generated by this action.^{4,5}

Nephrology is a relatively new area with regard to its advances in dialysis treatment, which is dedicated to the study and treatment of diseases that impair renal function. Renal Failure is now considered a public health problem, considering that the number of people affected by this disease has been increasing gradually and in an accelerated way in the last decades.^{6,7}

NCS is an instrument that facilitates the care carried out by the nursing team aiming at quality care. This instrument can help in the adaptation of the patient to the treatment and give him an individualized care. This care minimizes health problems, improves the quality of care and life of the patient.⁵

In accordance with the aforementioned, the question that drives this study is highlighted as follows: What are the contributions of the NCS with regards to the care provided to the chronic renal failure-bearing patient?

OBJECTIVE

Analyzing the contributions of the NCS regarding the care provided to the patient bearing a Chronic Renal Failure (CRF), aiming to identify the main nursing diagnoses found in these patients.

METHODS

This research is an integrative review of the literature. This method of study is based on gathering evidence of several types of research on a certain theme, through the selection of criteria, generating organized and systematic research. Based on the results, a synthesis on the subject is obtained, capturing the main findings of each study, aiming

at a broad approach of several studies in only one.⁸ During this research, the review model was followed, which describes six different steps that make up an integrative review of the literature, are: selecting hypotheses or questions for the abstract; exemplifying; representing the characteristics of primary research; analyzing the findings; interpreting the results; reporting the review.⁹

Given the aforesaid, this research used as criteria for inclusion scientific research articles, which are available in full, free of charge, through online and indexed in databases and virtual libraries, Literature and Retrieval System on Line (MEDLINE), *Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS)* [Latin American and Caribbean Literature in Health Sciences], Scientific Electronic Library Online (SciELO) and *Base de Dados de Enfermagem (BDENF)* [Nursing Database]. We used articles available only in Portuguese, aiming to seek a national reality of the matter.

The descriptors in Health Sciences were used to select the key words of the research: Nephrology, Renal Failure, Chronic Renal Failure, Nursing, Nursing Process, and Diagnosis. And the Nursing Care Systematization that, although not included in the descriptors, it was essential in the search. We did not use a time cut in this study, we used all articles found not taking into account the year of publication of the study, but ending with the year 2016 due to the period of data collection. All articles that did not respect all the items described above in the inclusion criteria were excluded.

In order to perform the searches, we made eight different combinations between the key words selected from this study, where we considered that no new combinations were necessary due to the saturation and repetition of the data found. Aiming for greater reliability of the researches, individual searches were carried out in each of the databases already mentioned. Thus, totaling 32 searches to select articles, which led to a total of 3,872 studies. Furthermore, the searching period was performed from January to March 2016.

Considering the criteria already mentioned for the inclusion of the articles in the research, we also took into account only the articles that in their context answered one of the three questions selected in the data collection instrument, which was developed by the researchers exclusively for this study, which refer to:

- Does the article refer to how the correct implementation and use of Nursing Care Systematization can help with the care provided to patients with Chronic Renal Failure? What does it highlight about the topic?
- What are the main difficulties in the implementation of the Nursing Care Systematization towards the Chronic Renal Failure-bearing patient?
- What are the main nursing diagnoses used for patients bearing Chronic Renal Failure?

The findings of this research will be demonstrated in two stages, results and discussion of results, in order to clarify and discuss the results in a more amplified, clear and organized way, as shown below.

Moreover, the instrument used in this research was built for data collection according to the instrument validated by Ursi in 2005.¹⁰

This research came about as a conclusion paper of the Nephrology Postgraduate Program from the Institute of Art and Science.

RESULTS AND DISCUSSION

Herein, a total of 3,872 articles were obtained. As previously mentioned, the selection was made according to the data of the articles and affinity with the general objective proposed in the present research through floating reading. After this initial stage, 44 potential articles were obtained as a result of the research, being evaluated in detail by the research instrument developed. After this evaluation, 15 articles were obtained, which were an integral part of the research. Such selection process as the reasons that resulted in the sampling are detailed in **Figure 1**.

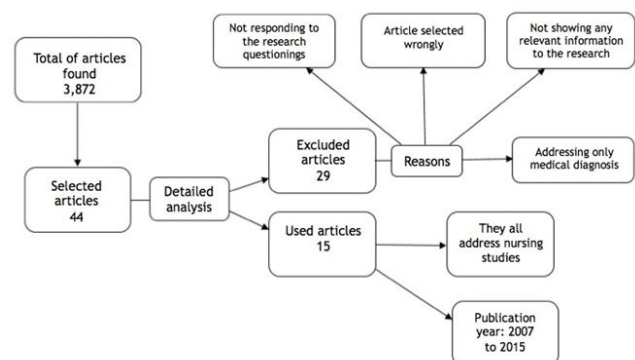


Figure 1 - Selection of the articles that comprised the research. Florianópolis city, Santa Catarina State, Brazil, 2017.

The results were divided according to the findings in three categories, namely: The importance of NCS in nephrology; The difficulties of implementing the NCS in nephrology; and, The main nursing diagnoses in nephrology.

The importance of NCS in nephrology

Concerning the findings of this category, we highlight among the main results obtained, considering as 100% the fifteen articles participating in the research, 80% (12 of 15) of the articles that demonstrated in their context factors that highlight the importance of NCS in nephrology services. There were also 73.26% (11 of 15) that demonstrated how the NCS can influence nursing care, although, seven articles highlighted that NCS helps to direct nursing care, coordinating the activities of the sector.

Another factor that stands out in the process of implementation of NCS in nephrology as a fundamental factor is the nursing team. Considering the articles used in this

study, 13.32% (2 of 15) were found, which brought in the context the importance of having a qualified and qualified nurse practitioner to execute the NCS correctly and insert it successfully in the care sector of the patient bearing CRE.

The difficulties of implementing the NCS in nephrology

Regarding this category, 19.98% (3 of 15) of the studies demonstrated in their context data on this subject. Furthermore, in all of them the main obstacles were the overload of nursing professionals in the nephrology services, the reduction of the number of professionals that is inversely proportional to the increase of patients admitted in these sectors, lack of motivation of the professionals, complexity of the services nephrology, and the lack of capacity building for such tasks related to NCS.

The main nursing diagnoses in nephrology

In this category, 79.92% (12 of 15) of the studies brought in their context outstanding factors related to nursing diagnoses. Furthermore, 73.26% (11 of 15) highlighted at least one nursing diagnosis in their context. Also highlighting, as some of the nursing diagnoses cited, risk of infection, risk of bleeding, altered sleep pattern, ineffective tissue perfusion, risk of imbalancing the fluid volume, among others. The nursing diagnoses are demonstrated according to the citation occurrence and validations used.

Table 1: Nursing diagnoses most found during the research. Florianópolis city, Santa Catarina State, Brazil, 2017.

Nursing diagnosis	Articles that have mentioned
Risk of infection	Frazão et al, 2014; ¹¹ Costa et al, 2010; ¹² Holanda e Silva, 2009; ¹³ Mendonça et al, 2013; ¹⁴ Lata et al, 2008; ¹⁵ Souza, Martino e Lopes, 2007; ¹⁶ Dalle e Lucena, 2012; ¹⁷ Souza e Avelare 2009 ¹⁸
Activity intolerance	Costa et al, 2010; ¹² Fernandes et al, 2012; ¹⁹ Lata et al, 2008; ¹⁵ Dalle e Lucena, 2012; ¹⁷
Risk of ineffective renal perfusion	Mendonça et al, 2013; ¹⁴ Lata et al, 2008; ¹⁵ Dalle e Lucena, 2012; ¹⁷ Souza e Avelare 2009 ¹⁸
Altered sleep pattern	Holanda e Silva, 2009; ¹³ Fernandes et al, 2012; ¹⁹ Lata et al, 2008; ¹⁵ Dalle e Lucena, 2012; ¹⁷
Excessive fluid volume	Costa et al, 2010; ¹² Souza e Avelare 2009; ¹⁸ Fernandes et al, 2014 ¹⁹
Ineffective protection	Mendonça et al, 2013; ¹⁴ Souza, Martino e Lopes, 2007 ¹⁶
Impaired skin integrity	Costa et al, 2010; ¹² Mendonça et al, 2013 ¹⁴
Ineffective control of therapeutic regimen	Costa et al, 2010; ¹² Holanda e Silva, 2009 ¹³
Impaired physical mobility	Mendonça et al, 2013; ¹⁴ Fernandes et al, 2012 ¹⁹
Provision for increased religiosity	Costa et al, 2010; ¹²
Deficiency in liquids volume	Souza e Avelare 2009; ¹⁸
Poor knowledge	Costa et al, 2010; ¹²
Sedentary lifestyle	Costa et al, 2010; ¹²
Ineffective protection	Holanda e Silva, 2009 ¹³
Risk of syndrome due to stress by change	Mendonça et al, 2013 ¹⁴
Impaired tissue integrity	Mendonça et al, 2013 ¹⁴
Risk of vascular trauma	Mendonça et al, 2013 ¹⁴
Risk of shock	Fernandes et al, 2012 ¹⁹
Risk of bleeding	Fernandes et al, 2012 ¹⁹
Sedentary lifestyle	Fernandes et al, 2012 ¹⁹
Fatigue	Fernandes et al, 2012 ¹⁹

Altered comfort	Souza, Martino e Lopes, 2007 ¹⁶
Risk of fluid imbalance	Dalle e Lucena, 2012 ¹⁷
Decreased cardiac output	Souza e Avelare 2009 ¹⁸
Spiritual suffering	Chaves et al, 2011 ²⁰
Impaired taste	Lins et al, 2013 ²¹
Impaired touch	Lins et al, 2013 ²¹
Impaired urinary elimination pattern	Lins et al, 2013 ²¹
Altered leisure	Lins et al, 2013 ²¹
Risk of social isolation	Lins et al, 2013 ²¹
Risk of loneliness and lower acceptance	Lins et al, 2013 ²¹

Considering the importance of the use of NCS in the area of nephrology, as previously explained, it is currently aware of the relevance of the NCS for nursing, taking into consideration that this is one of the regulatory and mandatory practices of the profession. Nonetheless, as we delve deeper into the findings of this research, the first result we first encountered was lacking to address the NCS. This is self-affirmed by the results, considering that in such a wide active search, a total result of 15 articles that emphatically dealt with this issue was reached, a number that can be considered relatively low, considering the breadth and relevance the matter.

One of the aspects broadly addressed in the studies was the emphasis of the NCS to improve the care provided to the patient and caregivers involved in CRE, thus making care directed, individualized and helping to coordinate activities.^{11,12,15,17,22} This aspect is already widely known and reported in other studies, which report that the NCS qualifies the care provided to the patient and provides an integral service to the basic human needs.²³ It is also noted that the NCS application helps to bring the value of the profession as a science, modifying the nursing visualization and guaranteeing professional recognition.²⁴ Based on these aspects addressed by such studies, we can notice the modification in the way of seeing the NCS by the professionals and the gain of space in the fields of action of the nurses, besides obtaining space in the research area as an important qualification factor of the assistance provided.

Professional qualification is considered to be an important factor in the achievement of the NCS in a correct and everyday way, considering that, in order for this process to be properly carried out, it is necessary that the professionals who perform it obtain enough knowledge to contemplate it. Therefore, it is necessary that in addition to the professionals' interest in being trained. The health service manager should stimulate the training and specialization of these professionals, aiming at an improvement in the assistance provided. It is important the active participation of the managers of the sector where the nurse is inserted, since the training is a common interest, where the nurse seeks the professional improvement and the manager wants the improvement of his services. Considering that this nurse is part of a health service, it is necessary to face the challenge of hiring the necessary time for training, and a joint effort is required.^{22,25} Additionally, related to this theme is the training of nurses as a basic parameter for those who

want to improve the development of services, as this is the way to obtain professional improvement and qualification, thus, optimizing the work rendered by this professional.²⁶

It is worth mentioning that nurses have the responsibility to offer quality care backed up in the nursing process, being contextualized and based on the Resolution No. 358/2009 from the *COFEN*, as previously discussed.^{5,21,27} The process also has an important function related to the documentation of care, which may assist in future medical searches related to the patient's medical record, as well as serve as a stimulus for possible scientific research.¹⁷ Corroborating this is a result of one of the studies of this research, which addresses in the results that among the documentary sources used, no evidence was found of the use of the nursing process.²²

The NCS and the nursing process are factors for care qualification, which support a care based on scientific precepts.²⁵ And also about the nursing process "(...), it was created with the intention of standardizing a language for the profession, reflecting the variety, complexity, and scientificity of nursing care."^{18:446} These factors raised by the studies used in this research, in addition to other studies addressed in the discussion, lead to the reflection that, at the present time, about the importance and essence of NCS. However, knowing these aspects does not directly reflect the use of NCS in the practical fields of nursing, whose motives are better supported in the discussion of the next categories.

Regarding the difficulties in the implementation of the NCS in the area of nephrology, we verified that the reality of daily life of nursing professionals, the results of this research are not different from those initially expected, based on the experience of the researchers in the practical field of nursing. Although little reported in the studies, evidences of the difficulty of the implementation of the NCS, all the studies that contemplated it referred as the main impact factor in this process the overload of the nursing professional.^{17,19,25}

This professional overload may be related to absenteeism, lack of previous training of the team and lack of commitment to work, such factors directly influence the quality of care provided. There is also a shocking dilemma, the lack of recognition by the professional team about the importance of the use of NCS, where such professionals do not have knowledge and understanding of the NCS as legal support of the profession.²⁸ Accordingly, without the proper knowledge of the importance of NCS, they do not apply this process in their daily lives, besides this factor alienated to the other aspects that result in the professional overload.

As previously reported, there is a process in the NCS that involves several factors, mainly highlighting human resources, the nursing process and instruments.³ Taking this as a presupposition, we have been able to show, in the light of the research findings, that a strong NCS implementation difficulties are related to human resources. Considering that without the correct sizing of nursing personnel, the availability of time for the execution of the NCS becomes impracticable.

Historically, the nursing professional is responsible for the range of care, and may even be considered a link between the other professions in the health area. This is because he is the care manager, and it is the one who, in a health care unit, spends the highest percentage of time with the patient, whether the nurse or nurse technician.²⁹

Taking into account this fundamental role of nursing in the care process, whether in the area of nephrology or in other areas, a factor that emerges with great relevance is the stress of the professional.^{17,25} It is now known that the nurse's work requires a high level of discernment, knowledge and responsibility, factors that together result in a routine that causes stress for the professional. Still, as a result of these professionals affected by stress, lack of motivation, a decrease in daily cognitive ability, and less precision in the development of patient care.²⁹ These factors directly influence the practice of NCS, since these are factors that hinder the process.

In the development of the NCS, nursing diagnoses are a fundamental part of the nursing process, since it is the one who will guide the care that should be directed to the patient in question. In other words, it is based on the realization of nursing diagnoses that we can individualize nursing care, making each nursing process unique. Correlating with such importance, we obtained in the context should research a percentage of 79.92% of the articles that covered in its scope factors related to this category.

The nursing diagnoses appear as a result of the complex procedure involved in the nursing process; such diagnoses help in a proposal of organized and directed care. However, in order to obtain diagnoses consistent with the patient's real situation, it is necessary to develop an adequate NCS, implying in the nursing process the methodology of its stages developed in a thorough way.³⁰ Among the articles addressed in this category, a large number of nursing diagnoses was found. In order to direct the results found in the most impacting, we define as a selection factor when the article presents more than one nursing diagnosis: use only the diagnoses, whose incidence is at least 50% in relation to the total sample of the study, when it is possible to access according to the scope of the study scope.

Herein, in ascending order as mentioned, we highlight the five diagnoses most cited in the assessed studies: risk of infection; activity intolerance; risk of ineffective renal perfusion; altered sleep pattern, and excessive fluid volume.^{11-21,27} All nursing diagnoses that fit the previously mentioned inclusion criteria are demonstrated according to the citation occurrence in **Table 1**. Considering that this study is an integrative review of the literature and because of this one should not modify the pre-existing results found in the research. Hence, the nursing diagnoses found were not modified, because each study covered a specific methodology to reach such results, so we did not group the results since it is not known which methodology and implications were involved in each finding. Therefore, the results were presented here in the same way as they were found.

CONCLUSIONS

The NCS is currently an important tool for improving and directing the care provided by nursing, as well as providing legal support for the exercise of the profession. Nevertheless, in order for this important tool for nursing to be used correctly by the professionals of the area, it is necessary for them to have scientific knowledge about the correct methodology to perform such a function and also to be aware of the importance of performing this systematization. However, besides the lack of qualification of the professionals, as points that make difficult the NCS process, the overload of the nursing team. Considering that this is an aspect widely mentioned by scholars in the field, the more overloaded and stressed the nursing professional is, the more unmotivated he will be to exercise NCS in a concise and rigorous manner.

It is also obtained from the results demonstrated here, where the nurses most of the time are unable to execute the NCS in a correct and complete manner, the impact of this on patient safety, since this process in its execution guarantees the improvement in quality of care and the patient safety process. Hence, leaving an open way for declining the quality of the care, the individuality of care and the patient safety.

According to the findings of this research, we can relate the students' concise knowledge to the lack of adherence sometimes by the nursing team to NCS, a doubly consolidated factor, partly due to the lack of commitment of the nursing team to such a process, and part involved with the managers of such health services who sometimes designate a sometimes inadequate staffing. But this fact cannot be given in a general way, since reality changes according to each institution that provides health services.

Therefore, we may conclude that there is a lack of adequate training of the nursing team in order to perform the NCS correctly. And another aspect that should be evaluated by the managers is the importance of NCS versus the work overload of the nursing team, aiming at resizing the team, so that it is possible to perform this process in a correct manner, consequently, implying a better quality service and direction.

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