

NURSING CARE IN HEMODIALYSIS

Cuidados de enfermagem na hemodiálise

Cuidados de enfermería en la hemodiálisis

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How to cite this article:

Guedes JBB, Lacerda MR, Nascimento JD, Tonin L, Caceres NTG. Nursing care in hemodialysis: integrative review. 2021 jan/dez; 13:653-660. DOI: <http://dx.doi.org/10.9789/2175-5361.rpcfo.v13.9402>.

ABSTRACT

Objective: To identify the nursing care provided to patients in hemodialysis. **Method:** An integrative review of Brazilian scientific production on the theme of nursing care in hemodialysis produced in the last ten years, available in the database of the Bank of Theses of the Coordination for Personal Improvement of Higher Education. To assess the information, the authors developed an instrument with three variables related to the question that guides the study. **Results:** The final sample consisted of 22 studies. A total of seven themes were identified: interpersonal relationships, health education, patient-centered care, ingestion care, care of venous access, adaptation to hemodialysis and patient safety, respectively. **Conclusion:** The need for deepening on the part of nursing care is emphasized based on the subjectivities that contextualize the patient inserted in hemodialysis.

DESCRIPTORS: Nursing care; Renal dialysis; Hemodialysis units, Hospital; Nephrology nursing.

RESUMO

Objetivo: Identificar os cuidados de enfermagem realizados ao paciente em hemodiálise. **Método:** Revisão integrativa da produção científica brasileira sobre a temática do cuidado de enfermagem em hemodiálise produzido nos últimos dez anos, disponíveis na base de dados do Banco de Teses da Coordenação de Aperfeiçoamento Pessoal de Nível Superior. Para a avaliação da informação os autores elaboraram um instrumento com três variáveis relacionadas a questão que norteia o estudo. **Resultados:** A amostra final foi constituída por 22 estudos. Identificou-se um total de sete temáticas: relacionamento interpessoal, educação em saúde, cuidado centrado no paciente, cuidado da ingesta, cuidado do acesso venoso, adaptação à hemodiálise e segurança do paciente respectivamente. **Conclusão:** Ressalta-se a

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necessidade de um aprofundamento por parte de enfermagem no cuidado a partir das subjetividades que contextualizam ao paciente inserido em hemodiálise.

DESCRITORES: Cuidados de enfermagem; Diálise renal; Unidades hospitalares de hemodiálise; Enfermagem em nefrologia.

RESUMEN

Objetivo: Identificar los cuidados de enfermería realizados al paciente en hemodiálisis. **Método:** Revisión integrativa de la producción científica brasileira sobre la temática del cuidado de enfermería en hemodiálisis producida em los últimos diez años, disponibles en la base de datos de Banco de tesis de la Coordinación de Perfeccionamiento Personal de nivel superior. Para evaluar la información los autores diseñaron un instrumento con tres variables relacionadas a la pregunta norteadora de este estudio.

Resultados: La muestra final fue constituida por 22 estudios. Se identifico un total de siete temáticas: relacionamiento interpersonal, educación en salud, cuidado centrado en el paciente, cuidado de la ingesta, cuidado del acceso venoso, adaptación a la hemodiálisis y seguridad del paciente respectivamente. **Conclusión:** Resalta la necesidad de una profundización por parte de enfermería en relación al cuidado a partir de las subjetividades que contextualizan al paciente insertado en hemodiálisis.

Descriptores: Cuidado de enfermería; Diálisis renal; Unidades de hemodiálisis en hospital; Enfermería em nefrología.

INTRODUCTION

Chronic Renal Disease (CKD) is a slow and progressive decrease in the rate of glomerular filtration that usually occurs in an imperceptible and asymptomatic manner leading to endocrine and metabolic dysfunctions.¹⁻² It is estimated that the CKD affects one out of ten people in the world, with a tendency to increase incidence in the coming years, so that more and more people will need some Treatment of Renal Support (TRS).³

The main TRS for CKD are Peritoneal Dialysis (PD), Kidney Transplantation (KT) and Hemodialysis. PD has gained preference as a choice for treatment, however, imposes on the family understanding, mastery of the technique and complex logistics organization to assume the development of the practice at home.⁴⁻⁵

KT is the best option to provide quality of life to the patient, but beyond the necessary compatibility between donor and recipient, it brings to the patient and the health system barriers such as: economic limitations, lack of basic prophylaxis and mainly the shortage of organs for donation.⁶

Thus, given the reality offered by PD and KT, hemodialysis (HD) appears as the most prevalent TRS in Brazil since 1950, when it was first implemented. HD is able to reduce the fatal effects produced by CKD by removing liquids and cleaning toxins.⁷

When performing HD, the patient faces difficulties and, sometimes, low quality of life linked to the frequency at which it is necessary to perform the procedure, approximately three times per week, from 3 to 5 hours per day. This produces causes discomfort, breakdown of daily routine, physical and psychosocial weakness and deficit in relationships.⁷

The HD is an experience marked by stress and anxiety and leads the patient to involuntarily lose his/her freedom. It is required complete dedication to its care and sometimes takes

away autonomy from their own lives.⁸ Thus, the beginning of HD is a milestone that divides the life history of the CKD carrier, mobilizes its affective core and leads the individual to relearn life in all aspects, creating new codes of family and social dynamics and personal experience.⁹

HD requires precise professional care and the professional nurse has a prominent role in this performance, because he/she plans and performs actions for the treatment and prevention of injuries, through care that leads to monitoring, reduction of complications and health guidance. Therefore, it is up to the nursing professional to develop his/her capacity to conduct clinical judgment from nursing diagnostics and care plan for each of the tangible and non-tangible signs and symptoms of the patient.¹⁰⁻¹¹

The nursing team is also emotional support for HD patients and seeks through the meaning attributed by the individual to his life experiences to identify what he expects from the care received and the essential factors to transpose this treatment in order to improve the patient's quality of life.¹²

Considering the exponential growth of CKD carriers, as a consequence of patients in HD, and the important role of the development of the scientific knowledge of nursing in the care of these patients, the following question is asked: What are the nursing care for the patient who performs HD described in the primary studies of Brazilian nursing?

Thus, this study aims to identify the nursing care performed to the patient in HD in the primary studies of Brazilian nursing.

METHOD

It is an integrative review on the Brazilian scientific production in relation to the subject of nursing care in hemodialysis. The Integrative Review allows the synthesis of multiple published studies and enables general conclusions regarding a particular field of study.¹³⁻¹⁴

This was followed by the steps as set out by Mendes, Silveira and Galvão: 1) identify the topic and the selection of the hypothesis or research question; 2) the establishment of criteria for inclusion and exclusion of studies; 3) a definition of information that can be extracted from the selected studies; 4) assessment of the included studies; 5) interpretation of the results; and 6) submission of the review/synthesis of knowledge.¹³

Inclusion criteria were considered: theses and dissertations available in the *Banco de Teses da Coordenação de Aperfeiçoamento Pessoal de Nível Superior* (Bank of Theses of the Coordination of Personal Improvement of Higher Level - BTC/CAPES), produced in Postgraduate Programs of Nursing, that addressed nursing care to the patient in HD, between the years 2008 to 2018. The exclusion criteria were: theses and dissertations that did not address hemodialysis nursing care, that were repeated or not available in full online.

The search and analysis of the productions were carried out in the period from December 2018 to January 2019, in the BTC/CAPES. The descriptors 'Nursing Care' and 'Renal Dialysis', according to the descriptors in Health Sciences (Decs), were used.

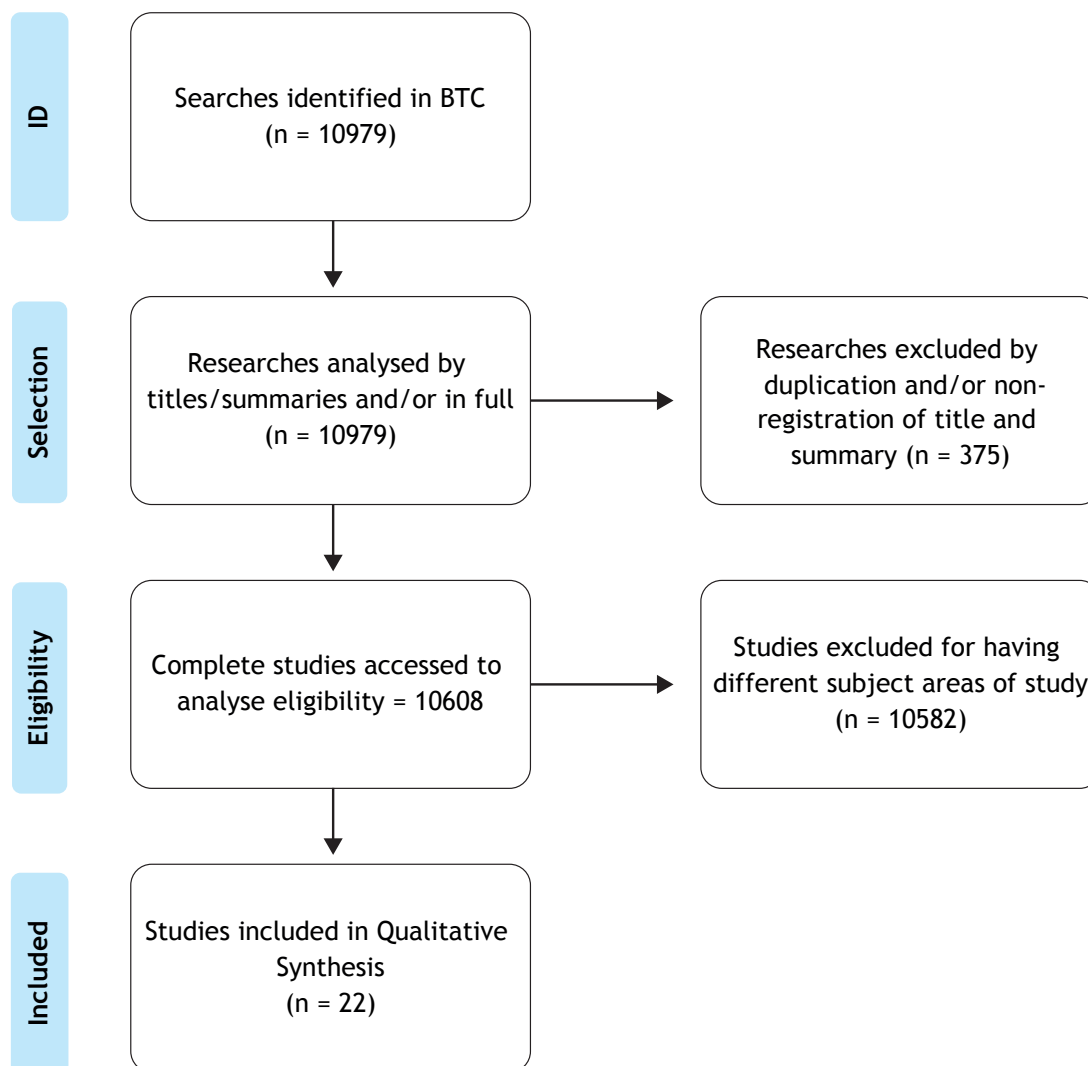
In the Advanced Search, the following refinements were used: studies of "Masters and Doctorate", carried out in the

period (2008 - 2018), but in the search it was found that in the database of BTC CAPES, no studies of this theme were available in the period 2008 – 2012, and then the sampling composed of researches published in the period 2013-2018; thus, soon applied the refinement “Health Sciences”, “Area of Nursing Knowledge”, totaling in 10.979 studies. After reading and judging the titles and abstracts, 10.957 publications were excluded because they were studies that had no relation to

the subject of this research, repeated publications, or without registration of title and summary, resulting in 22 theses and dissertations for the analysis, thus composing the sample of this study.

For this selection process, the *Preferred Reporting Items for Systematic reviews and Meta-Analyses* (PRISMA)¹⁵ recommendations were used, as shown in Figure 1.

Figure 1 - Flow Chart of the selection of primary studies for the Integrative Review. Curitiba, PR, Brazil, 2018.



Source: Adapted from PRISMA¹⁵ model.

In order to define the information to be extracted, an analysis matrix was prepared that considered the following variables: year, title, area of knowledge, university, theoretical reference, methodology, type of study and the type of nursing care.

After that, the information was evaluated considering the relevance of the subject of care addressed by each of the studies. Seven themes were identified: interpersonal relationships, health education, patient-centred care, ingestion care, venous accesses care, adaptation to hemodialysis and patient safety.

RESULTS AND DISCUSSION

The final sample consisted of 22 primary studies (16 dissertations and six theses) that pointed out nursing care performed to the patient in HD.

Table 1 - Presentation of the primary studies included in the Integrative Review, 2013 to 2018. Curitiba, PR, Brazil, 2018.

Year	Title	Author
2013	Communication in the interpersonal relationship between nurse and client undergoing the hemodialysis process	ADRIANA MARIA DE OLIVEIRA FURTADO
	Distance and proximity to the body undergoing hemodialysis: a study on proxemic communication in nursing care	ALESSANDRA GUIMARAES MONTEIRO MOREIRA
	Promotion of mental health of chronic renal adolescents: light technology as nursing care	ISLANE COSTA RAMOS
	Sharing Knowledge and Practices of Clients with Chronic Renal Failure in the Care of the Venous Catheter for Hemodialysis	CHRISTIANY MOCALY GONZALES
2014	Accuracy of clinical indicators of the diagnosis of nursing excessive volume of liquids in patients undergoing hemodialysis	MARIA ISABEL DA CONCEICAO DIAS FERNANDES
	Nutrition nursing diagnosis in patients undergoing hemodialysis	ERIDA MARIA DINIZ LEITE
	Concept analysis of the diagnosis of nursing ineffective self-control of health in patients submitted to HD	FERNANDA BEATRIZ BATISTA LIMA E SILVA
	Diagnosis, interventions and results of nursing related to the quality of life in hemodialysis treatment	ANELISE NOGUEIRA DE LIMA
2015	Evidence of nursing orientation for the self-care of clients with chronic kidney disease in surrogate renal therapy: socio-aesthetic perspective	BRUNO LESSA SALDANHA XAVIER
	Clinical validation of the diagnosis of nursing ineffective protection in patients undergoing hemodialysis	JESSICA DANTAS DE SA
2015	Clinical validation of the diagnosis of nursing ineffective protection in patients undergoing hemodialysis	CECILIA MARIA FARIAS DE QUEIROZ
	Diagnosis, interventions and nursing results for people undergoing hemodialysis: consensus validation by specialist	MARIA MADALENA DEL DUQUI
2016	The management of nursing care in the complexity of adapting the person with chronic kidney disease in hemodialysis	MARIA JOSE CARVALHO FERREIRA
	The confrontations experienced by young hemodialysis adults in the health-disease transition process: an approach of care in the adaptive perspective of Roy	BEATRIZ ACEVEDO PACHECO CARDOSO
	The nurse and the patient undergoing continuous hemodialysis in the ICU: the management of technology from the perspective of safety	BIANCA RIBEIRO PORTO DE ANDRADE
	Schedule of evaluation of the chronic renal patient safety in hemodialysis: focus on the clinical care of nursing	LETICIA LIMA AGUIAR
2017	Nursing records: the planning of patient care in hemodialysis	MARIA ANTONIA DOS SANTOS SILVA
	Construction and validation of an educational video for the promotion of self-care of patients with arteriovenous fistula	NATALIA RAMOS COSTA PESSOA
	The senses of space and bodies in hemodialysis: the proxy communication of nursing with the renal patient	ALESSANDRA GUIMARAES MONTEIRO MOREIRA
2018	Construction and validation of nursing diagnosis risk of excessive volume of liquids from a medium-range theory	MARIA ISABEL DA CONCEIÇÃO DIAS FERRNANDES
	Puncture of arteriovenous fistula in hemodialysis patients: evidence for nursing	JESSICA GUIMARAES RODRIGUES
	People undergoing hemodialysis and nursing care: mixed method study	SYLVIA MIRANDA CARNEIRO

Source: Authors, 2019.

With this information, it was identified that most publications are from 2014 (22.7%), followed by 2016 (18.2%), 2015, 2017 and 2018 with the same number (13.6%).

Among the Brazilian Universities with the course of post-graduate *strictu sensu*, the largest number of available publications is generated from Rio de Janeiro Federal University (UFRJ) (36.4% of subjects), Rio Grande do Norte Federal University (UFRN) with (27,3%), followed by Goiás Federal University (UFG) (9.1%), and the Universities: Ceará State University (UECE) (4.5%), Ceará Federal University (UFC) (4.5%), Juiz de Fora Federal University (UFJF) (4.5%), Mato Grosso do Sul Federal University (UFMS) (4.5%), Pernambuco Federal University (UFPE) (4.5%), and Fluminense Federal University (UFF) (4.5%).

The studies analysed were of the type: qualitative (54.5%), mixed (31.8%) and quantitative (13.6%). Among the chosen methods, they were identified as descriptive studies (22.7%),

methodological studies (13.6%), exploratory studies (13.6%), integrative review (9%), convergent assistance (9%); and with less predominance the studies of sectional type (4.5%), ethnographic (4.5%), sociopoetic (4.5%), longitudinal (4.5%), transversal (4.5%), data-based theory (4.5%) and latent class analysis (4.5%).

Most studies (63.6%) did not declare the use of theoretical referential. Of the 36.4% who presented benchmarks, The Theory of Social Representations of Betty Newman, Paulo Freire, Complexity Paradigm, Walker and Avant, Orem Theory, Roy's theory, Morse Field and Nola Pender were cited in the 1/1 ratio.

It was found that the subjects of care developed in the studies were: interpersonal relationship, health education, patient-centered care, ingestion care, venous access care, HD adaptation and patient safety.

Table 2 - Presentation of the thematic units and sub-units of hemodialysis nursing care identified in the selected studies.

Thematic Units	Thematic sub-units	F
Interpersonal relationship	Involvement between professionals and patients.	4
	Quality of interaction in interpersonal relationships.	4
	Professional body expression in care.	2
	Creating the interactive environment.	2
	Customer perception of interrelations.	2
Health education	Group Education during HD.	1
	Education for self-care.	5
	Promotion of quality of life.	3
	Educational technology.	2
Patient-Centered Care	Attention directed to the reality of the patient.	2
	Care planning in conjunction with the customer.	3
	Systematization of nursing care according to the reality of the unit.	2
Ingestion care	Control of volemia.	1
	Control of excessive liquid volume.	3
	Targeting the nutritional needs of the person in HD.	1
Watch out for the venous flare	Self-assured of venous access.	3
	FAV puncture method	1
HD adaptation	Therapeutic approach to stressor agents	1
	Promotion of mental health.	1
	Use of light technology.	1
	Patient safety	2

Source: Prepared by the authors (2019), based on the selected studies.

We have identified the issue of care in the interpersonal relationship as the predominant (in 16 studies), making it a reference to the great importance it has for the professional and the patient, that care must happen in the construction of an interactive environment (2 studies), and it is vital that a professional is involved with the patient at the point-of-care (4 studies), which provides a two-way interaction for quality of care (4), having an empathetic body expression while caring (2), and to be open to understand the customer (2 studies).

In health care education, studies highlight self-care education (5 studies). It is noted that orientation to the patient in HD can provide continuous care and at the same time provide independence. Also identified was the nursing work in the promotion of the quality of life that aims to make pleasure possible even in the face of the limitations imposed by HD and the CKD (3 studies).

Even in Health Education the professional nurse can make use of tools such as educational technologies (2 studies), however, although there is a diversity of materials available nowadays, it is necessary a deepening regarding its implementation by nursing for a better use of resources. It was also shown that the approach of Group Education (1 study) is insufficient for the patient at the time of HD.

In relation to the subject of patient-centered care, it was shown that the reality of the patient needs to be assumed as a point of reference to guide the actions of nursing in each individual, starting from the subjectivities that involve him/her. The patient's leading role in the centrality of care is still underestimated in the researches, being approached in 2 of the selected studies. Still, the results are scarce in view of the foundation of specific nursing care plans and directed to the experience of the patient at the moment of HD.

The studies showed that the planning of nursing care for the patient in HD should happen in conjunction with the patient (2 studies), considering the particular and living contexts of the patient. Similarly, the Systematization of Nursing Care directed to the unit (2 of the studies) shows the lack of building assumptions for nursing care based on the reality of the environment where the individual is cared for.

In relation to nursing care directed to the patient's intakes, it is noticed the correlation between the care for the control of excessive fluid (2 studies) and the attention spent to predict uncontrolled volemia (1 study). Facing ingestion related to nutrition, only 1 study dealt with the responsibility of the nurse for the nutritional needs of this clientele.

In relation to nursing care directed to venous access, it is highlighted as important the promotion of self-care (3 studies), as well as the techniques of care such as the puncture of the arteriovenous fistula (1 study).

It was also identified that the promotion of the adaptation of the patient to the treatment of HD is a theme present in the selected studies. For this purpose, nursing can exercise care such as the therapeutic approach of stressor agents (1 study), promote mental health (1 study) and the use of light technology (1).

With regard to the nursing care facing the safety of the patient in HD, only 2 studies showed interest in this topic,

which is worrying given the numerous risks that threaten the patient in HD.

Regarding the care in the interpersonal relationship of nursing, the findings emerged that the client should be careful with a greater involvement of the nurse in relation to the patient, exercising a professional practice with quality in the interaction, starting from the awareness of the body expression that will appear in the care, and being sensitive to understand the client, being this the basis to create an environment of interactive care.

Presenting in the same order of ideas of Waldow, who states that the professional has the premise of offering care with the opportunity of a two-way relationship, in which those who receive the attention entrust their humanity to those who take care of it, but it is indispensable for this that the nursing professional assumes a body and behavioral language that allows the opening of channels of trust, that open access to the human areas where it can only enter through humanism.¹⁶

It is pointed out that health education as a nursing care action can be performed in a group during HD, with the aim of promoting hope and joy and consequently to promote quality of life.

Therefore, Health Education, or also called Therapeutic Nursing Communication, is vital in the prevention of physical and emotional complications of the patient and can help in the motivation to maintain or recover the quality of life, or even help the patient to create an awareness of continuous care through self-care education.¹⁷

It is confirmed that the educational technologies have the role to transmit the information, to assist in the comprehensive care of the patient in a way that's more illustrative, but the professional will have to consider the vocabulary which contains such technology, and so avoid the use of technical terms, understanding that the accessibility of information depends not only on the technology used, but also on the consideration of a language that is understandable to the receiver.¹⁸

It is noteworthy, therefore, that for nursing to approach the patient's subjective in their care, they must perceive the patient as the protagonist and the center of the therapeutic plan and likewise strive to know their perspectives.

For this purpose, the nurse requires attention and sensitivity to the patient's expressions in order to identify and understand the language of the patient and decode their expressions and the demands of care. However, despite the growing production of studies that suggest for nursing to approach the subjectivities of the individual for the elaboration of the plan of nursing care in HD, it is still insufficient the knowledge that reveals what are the care that the patient demands during HD sessions in addition to those technicians.¹⁹

It is also considered that a Systematization of Nursing Care (SNC) directed to the reality of the HD unit must happen. For this, it is necessary that the professional discover the user's living elements in HD, articulating their actions from each element that composes and contextualizes the scope where the HD takes place.²⁰⁻²¹

The complications related to the uncontrolled volemia are among the main causes of deaths of the patient in HD, so it was identified in the studies that the control of the volume of excessive fluid directly influences the prevention of complications during HD.²²

With regard to nursing care, it is essential for nutrition to draw up a nursing care plan aimed at the nutritional needs of this clientele in the face of the various risks related to the patient's intakes in HD; being demonstrated that the specific nursing care for nutrition in HD deserve to be evaluated and conducted to the understanding of how the dietary restrictions imposed by the disease, metabolic alterations, poly medication and factors related to HD generate collateral affections that harm the patient's nutritional standard.²³

The promotion to self-care of venous access can empower the patient to protect the access route on a daily basis, and even help in the durability of the venous network. Thus, it is evident the worthlessness of the control method exclusive for health care professionals, because in order to ensure continuity of care, it is necessary to develop educational initiatives that will allow the patient to self-care, and to act in the face of the difficulties it can present to his/her access in and out of the treatment facility.²⁴

For the need to adaptations due to the changes in the lifestyle of the individual in HD, it stands out the use of tools such as a therapeutic approach for stressor agents, promotion of mental health and use of light technology.

The literature is still not clear, in depth, to the positive or negative effects on the mental health of the patient in adaptation to HD; as in order to determine this, it is necessary to approach the conditions of the patient, and to consider those factors that are not clinical, but related to relationships factors such as family, work, time, income, and beliefs, leading to the requirement for validation of these experiences and as a result, a care-based on the different peculiarities of the patient.²⁵

It is noted in other aspects that patients inserted in HD are severely vulnerable to episodes that put the safety of their health at risk, which requires the nursing to check the aspects that in its practice could compromise the safety during treatment.

Thus, nursing care should be provided in an atmosphere of safety, and so for this, the professional must be trained in a theoretical and practical way to provide quality nursing care.²⁶

CONCLUSION

Nursing has a central role in the development of care directed to patients in HD, because they propose physical and biopsychosocial interventions that suit the needs of patients seeking to improve or maintain the quality of life of these people.

It is believed that the following study provides foundations that will help guide the approaches of future research and the practice of nursing care in HD. It is also hoped that the findings of this study contribute to the nursing care practice in the improvement of care through the provision of scientific

evidence for the redesign and creation of plans of care tailored to the individual needs of the patient in HD.

In the elaboration of this research, the care with the subjectivities of the patient emerged as one of the themes that call for greater scientific deepening to be soon carried to the practice in nursing care, however, it is noted that technical practices prevail as the main focus for nursing care for HD patients.

REFERENCES

1. Medina LMM. La enfermedad renal crónica en Colombia: necesidades en salud y respuesta del Sistema General de Seguridad Social en Salud. *Rev Gerenc Polit Salud*, Bogotá (Colombia) [Internet]. 2016 [cited 2019 Mar 25]; 15(30):212-33. Available from: <http://www.scielo.org.co/pdf/rgps/v15n30/v15n30a15.pdf>
2. Silva RR, Souza LV, Oliveira GJ, Silva CB, Rocha TC, Holanda JR. Estratégias de enfrentamento utilizadas por pacientes renais crônicos em tratamento hemodialítico. *Esc Anna Nery* [Internet]. 2016 Jan-Mar [cited 2019 Mar 25]; 20(1): 147-54. Available from: <http://www.scielo.br/pdf/ean/v20n1/1414-8145-ean-20-01-0147.pdf>
3. International Society of Nephrology. [Internet]. 2018 [cited 2019 Mar 25]. Available from: <https://www.theisn.org/focus/ckd#health-atlas>
4. Souza DA, Junior EVS, Silva JS, Lapa PS, Boery EM, Boery RNSO. Diálise peritoneal e qualidade de vida. *Revista saúde e desenvolvimento* [Internet]. 2017 [cited 2019 Jun 19]; 11(6). Available from: <https://www.uninter.com/revistasaude/index.php/saudeDesenvolvimento/article/view/592>
5. Timm AMB, Beuter M, Perlini NMO, Schwartz E, Budó MLD, Pauletto MR. A dinâmica da família frente à diálise peritoneal no domicílio. *Rev Enferm UFSM* [Internet]. 2015 [cited 2019 Jun 19]; 5(3):511-20. Available from: <https://periodicos.ufsm.br/reufsm/article/view/16632/pdf>
6. Lopes SGR. Narrativas de pessoas com doença renal crônica: a experiência do transplante de rim. Tese [Doutorado em enfermagem]. Florianópolis (RS): Universidade Federal de Santa Catarina; 2016 [cited 2019 Jun 19]. Available from: <http://150.162.242.35/bitstream/handle/123456789/175905/345300.pdf?sequence=1&isAllowed=y>
7. Santos BP, Oliveira VA, Soares MC, Schwartz E. Doença renal crônica: relação dos pacientes com a hemodiálise. *ABCS Health Sci* [Internet]. 2017 [cited 2019 Mar 25]; 42(1):8-14. available from: <https://www.portalnepas.org.br/abcshs/article/view/943>
8. Silva CE, Santos TR, Barbosa TLA, Silva CSO, Gomez LMX. Vivenciando o tratamento hemodialítico pelo portador de insuficiência renal crônica. *Rev Cubana Enferm* [Internet]. 2014 [cited 2019 Jun 19]; 31(3). Available from: <http://www.revenfermeria.sld.cu/index.php/enf/article/view/316/95>
9. Oliveira VA, Schwartz E, Soares MC, Santos BP, García RP, Lise F. Relações familiares de mulheres. *Rev Aten Saúde* [Internet]. 2016 [cited 2019 Jun 19]; 14(47):36-42. Available from: https://docs.google.com/viewerng/viewer?url=http://seer.uscs.edu.br/index.php/revista_ciencias_saude/article/viewFile/3283/pdf
10. Cordeiro AP, Rossetti NLM, Duarte LV, Moriya TM, Terçariol CAS, Ferreira V. Complicações durante a hemodiálise e a assistência de enfermagem. *Enferm rev* [Internet]. 2016 [cited 2019 Jun 19]; 19(2):247-54. Available from: <http://periodicos.pucminas.br/index.php/enfermagemrevista/article/view/13162>
11. Costa RHS, Dantas ALM, Leite EMD, Lira AL, Vitor AF, Silva RAR. Complicações de pacientes renais durante sessões hemodialíticas e intervenções de enfermagem. *Fundam Care online* [Internet]. 2015 [cited 2019 Jun 18] 7(1):2137-2146. Available from: <https://www.redalyc.org/pdf/5057/505750945038.pdf>
12. Herbias LH, Soto RA, Figueroa HB, Reinoso LA. Significado de calidad de vida en pacientes con terapia de hemodiálisis: un estudio fenomenológico. *Enferm Nefrol* [Internet]. 2016 [cited 2019 Jun 18] 19(1):37-44. Available from: http://scielo.isciii.es/pdf/enefro/v19n1/05_original4.pdf
13. Mendes KDS, Silveira RCCP, Galvão CM. Revisão integrativa: método de pesquisa para a incorporação de evidências na saúde e na enfermagem. *Texto Contexto Enferm* [Internet]. 2008 [cited 2019 Mar 25]; 17(4):758-64. Available from: <http://www.scielo.br/pdf/tce/v17n4/18.pdf>

14. Souza MT, Silva MD, Carvalho R. Revisão integrativa: o que é e como fazer. Einstein (São Paulo) [Internet]. 2010 [cited 2019 Mar 25]; 8(1):102-6. Available from: http://www.scielo.br/pdf/eins/v8n1/pt_1679-4508-eins-8-1-0102
15. Mother D, Liberati A, Tetzlaff J, Altman DG. The PRISMA Group. Preferred Reporting Items for Systematic Reviews and MetaAnalyses: The PRISMA Statement. PLOS Med [Internet]. 2009 [cited 2019 Mar 25]; 6(7). Disponível em: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2707599/pdf/pmed.1000097.pdf>
16. Waldow VR. Enfermagem: a prática do cuidado sob o ponto de vista filosófico. Investig Enferm. Imagem Desarr [Internet]. 2015 [cited 2019 Mar 25]; 17(1):13-25. Available from: <https://www.redalyc.org/pdf/1452/145233516002.pdf>
17. Horta HHL, Lopes ML. Complicações decorrentes do tratamento dialítico: contribuição do enfermeiro no cuidado e educação ao paciente. Revista Enfermagem Contemporânea [Internet]. 2017 [cited 2019 Mar 25]; 6(2):221-27. Available from: <https://www5.bahiana.edu.br/index.php/enfermagem/article/view/1457/1082>
18. Medeiros JRR, Lima MA, Araújo LL, Galiza FT, Felipe GG, Caetano JÁ. Validação de tecnologia educativa para cuidado em hemodiálise. Rev enferm UFPE on line [Internet]. 2016 [cited 2019 Mar 25]; 10(11):3927-34. Available from: <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/11474>
19. Freitas RLS, Mendonça AEO. Cuidados de enfermagem ao paciente renal crônico em Hemodiálise. Revista cultural e científica do UNIFACEX [Internet]. 2016 [cited 2019 Mar 25]; 14(2):23-35. Available from: <https://periodicos.unifacex.com.br/Revista/article/view/678/pdf>
20. Ribeiro KRA. Cuidados de enfermagem aos pacientes com insuficiência renal crônica no ambiente hospitalar. Revista Recien [Internet]. 2016 [cited 2019 Mar 25]; 6(18):26-35. Available from: <https://www.recien.com.br/index.php/Recien/article/view/159>
21. Cruz MRF, Salimena AMO, Souza IEO, Melo MCSC. Descoberta da doença renal crônica e o cotidiano da hemodiálise. Cienc Cuid Saúde [Internet]. 2016 [cited 2019 Mar 25]; 15(1):36-43. Available from: <https://pdfs.semanticscholar.org/984f/687b3446eb0d6d15012c7d12781417837401.pdf>
22. Silva MS, Marini TOS, Silva CFB. Enfermagem e Suas Intervenções Nas Principais Complicações Ocorridas Durante a Sessão de Hemodiálise. Rev Enfermagem e Saúde Coletiva [Internet]. 2016 [cited 2019 Mar 25]; 1(2):45-60. Available from: <http://www.revesc.org/index.php/revesc/article/view/7/9>
23. Grasselli CSM, Lopes ECL, Lemos LC, Nogueira DA, Fonseca CC, Carvalho TP, et al. Autoestima, imagem corporal e estado nutricional antropométrico de mulheres com insuficiência renal crônica em hemodiálise. Nutr Clín Diet Hosp [Internet]. 2016 [cited 2019 Mar 25]; 36(4):41-7. Available from: <https://revista.nutricion.org/PDF/GRASSELLI.pdf>
24. Nogueira FLL, Freitas LR, Cavalcante NS, Pennafort VPS. Percepção do paciente renal crônico acerca dos cuidados com acessos para hemodiálise. Cogitare Enferm [Internet]. 2016 [cited 2019 Mar 25]; 21(3):1-8. Available from: <https://www.redalyc.org/articulo.oa?id=483653826003>
25. Rubio AR, Ascencio JM, Raventos MP, Francisco JM. Revisión de estudios sobre la calidad de vida relacionada con la salud en la enfermedad crónica avanzada en España. Nefrología (Madr.) [Internet]. 2015 [cited 2019 Mar 25]; 35(1):92-109. Available from: <http://scielo.isciii.es/pdf/nefrologia/v35n1/revision.pdf>
26. Freitas EA, Freitas EA, Santos MF, Félix KC, Moraes LM, Ramos LS. Assistência de enfermagem visando a qualidade de vida dos pacientes renais crônicos na hemodiálise. Rev Inic Cient Ex [Internet]. 2018 [cited 2019 Mar 25]; 1(2):114-21. Available from: <https://revistasfasesenaaires.com.br/index.php/iniciacao-cientifica/article/view/59/24>

Received in: 14/10/2019

Required revisions: 16/10/2019

Approved in: 05/02/2020

Published in: 20/04/2021

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**Disclaimer: The authors claim to
have no conflict of interest.**