



Journal of Nursing

Revista de Enfermagem

UFPE On Line

ISSN: 1981-8963

ORIGINAL ARTICLE

CONTRIBUTION OF HORTA THEORY FOR CRITICAL OF NURSING DIAGNOSTICS PATIENT IN HEMODIALYSIS

CONTRIBUIÇÃO DA TEORIA DE HORTA PARA CRÍTICA DOS DIAGNÓSTICOS DE ENFERMAGEM NO PACIENTE EM HEMODIÁLISE

CONTRIBUCIÓN DE LA TEORÍA DE HORTA PARA CRÍTICA DE LOS DIAGNÓSTICOS DE ENFERMERÍA EN EL PACIENTE EN HEMODIÁLISIS

Gilberto de Lima Guimarães¹, Vania Regina Goveia², Isabel Yovana Quispe Mendoza³, Kleyde Ventura de Souza⁴, Mariana Oliveira Guimarães⁵, Selme Silqueira de Matos⁶

ABSTRACT

Objective: to discuss the theoretical and underlying philosophy aspects to nursing diagnoses formulated for hemodialysis patients according to Horta Theory. **Method:** it is an exploratory, descriptive study with a quantitative approach carried out in the hemodialysis unit of a teaching hospital. The sample was 42 adult patients of both genders, in treatment for at least 90 days. **Results:** it was identified nine nursing diagnoses, of which seven were qualified for basic human needs psychobiological affected and two for the psychosocial basic human needs. **Conclusion:** there was no diagnosis for psycho-spiritual basic human need. This fact reinforces the influence of the biologicist paradigm that moves the nurse to patient fragmentation, alienation, and is opposed to holism. Their overcoming will awake them for the development of a practice of human, supportive, technically and scientifically competent nursing. **Descriptors:** Nursing Theory; Renal Dialysis; Nursing care; Diagnosis of Nursing; Renal Insufficiency.

RESUMO

Objetivo: discutir os aspectos teóricos e filosóficos subjacentes aos diagnósticos de enfermagem formulados para os pacientes em hemodiálise segundo a Teoria de Horta. **Método:** estudo descritivo exploratório, com abordagem quantitativa, realizado na unidade de hemodiálise de um hospital escola. Amostra composta por 42 pacientes adultos de ambos os sexos, em tratamento há, no mínimo, 90 dias. **Resultados:** foram identificados nove diagnósticos de enfermagem, dos quais sete classificados para as necessidades humanas básicas afetadas psicobiológicas e dois para as necessidades humanas básicas psicossociais. **Conclusão:** não houve diagnóstico para a necessidade humana básica psicoespiritual. Fato que reforça a influência do paradigma biologicista que move o enfermeiro à fragmentação do paciente, à alienação e opõe-se ao holismo. Sua superação o despertará para o desenvolvimento de uma prática de enfermagem humana, solidária, técnica e cientificamente competente. **Descritores:** Teoria de Enfermagem; Diálise Renal; Cuidados de Enfermagem; Diagnóstico de Enfermagem; Insuficiência Renal.

RESUMEN

Objetivo: discutir los aspectos teóricos y filosóficos subyacentes a los diagnósticos de enfermería formulados para los pacientes en hemodiálisis según la Teoría de Horta. **Método:** estudio descriptivo exploratorio, con enfoque cuantitativo realizado en la unidad de hemodiálisis de un hospital escuela. La muestra fue compuesta por 42 pacientes adultos de ambos sexos, en tratamiento por lo mínimo de 90 días. **Resultados:** fueron identificados nueve diagnósticos de enfermería, de los cuales siete clasificados para las necesidades humanas básicas afectadas psico-biológicas y dos para las necesidades humanas básicas psicossociales. **Conclusión:** no hubo diagnóstico para la necesidad humana básica psico-espiritual. Hecho que refuerza la influencia del paradigma biologicista que mueve al enfermero a la fragmentación del paciente, la alienación y se opone al holismo. Su superación lo despertará para el desarrollo de una práctica de enfermería humana, solidaria, técnica y científicamente competente. **Descriptor:** Teoría de Enfermería; Diálisis Renal; Cuidados de Enfermería; Diagnóstico de Enfermería; Insuficiencia Renal.

¹Nurse, Ph.D. Professor, Nursing Graduation, Federal University of Minas Gerais/UFMG. Belo Horizonte (MG), Brazil. E-mail: drgilberto.guimarães@hotmail.com; ²Nurse, Ph.D. Professor, Nursing Graduation, Federal University of Minas Gerais/UFMG. Belo Horizonte (MG), Brazil. E-mail: vaniagoveia@ufmg.br; ³Nurse, Ph.D. Professor, Nursing Graduation, Graduate Program in Nursing, Federal University of Minas Gerais/UFMG. Belo Horizonte (MG), Brazil. E-mail: isabelyovana@ufmg.br; ⁴Nurse, Ph.D. Professor, Nursing Graduation, Graduate Program in Nursing, Federal University of Minas Gerais/UFMG. Belo Horizonte (MG), Brazil. E-mail: kleydeventura@gmail.com; ⁵Odontology student, participant of the Voluntary Scientific Initiation Program, Federal University of Minas Gerais/UFMG. Belo Horizonte (MG), Brazil. E-mail: bones_bones27@hotmail.com; ⁶Nurse, Ph.D. Professor, Graduation in Nursing, Federal University of Minas Gerais/UFMG. Belo Horizonte (MG), Brazil

INTRODUCTION

Since the twentieth century in the dialysis service, particularly in hemodialysis, the managerial role in nursing has assumed critical importance in linking the various health team professionals in the patient with the assistance of chronic kidney disease on dialysis phase and organization of nursing work. In this sense, the nurse who works in this service experiences the challenge of building knowledge about which bases his management and care practice.¹

The hemodialysis treatment is given to patient demands immediate and specific nursing interventions that require grounded planning scientifically. In this way, nursing care, arising from proposed interventions is essential for patients who have undergone this therapy. In this context, the profession has developed knowledge and implemented new care alternatives, through his work methodology, based on the scientific method, defined as systematization of Nursing Assistance (SAE).¹⁻²

SAE is being implemented in healthcare practice in hemodialysis giving patient safety, quality of care and professional autonomy of nurses to organize the work on the methodology, staff, and instruments, and enable the operation of the Nursing Process (NP). This methodological tool guides the care and documentation of care practice, providing visibility and social recognition of the profession. To this end, the NP is organized into five steps interrelated and interdependent: Nursing History, Nursing Diagnosis, Planning, Implementation and Evaluation of Nursing. Among the steps, the nursing diagnosis is recognized as a guide for planning and implementation of interventions, as it represents the basis for the selection of actions or interventions with which it aims to achieve the expected results.¹⁻⁷

The NP must be based on a theoretical support to guide it, being up to the nurses who perform their professional activities, to list the best translating their care worldview within the set of theories available in nursing. Thus, it will be chosen based on the theory that NP will be developed.^{4,7}

The nursing diagnoses are clinical judgments on the responses of individuals to actual or potential health problems, which subsidize the nursing interventions to achieve outcomes for which nurses are responsible. This judgment provides criteria for care evaluation and direct care, promoting research and teaching, encouraging the patient to participate in the treatment plan

and contributing to the expansion of nursing knowledge.⁶⁻⁷

In this context and given the complexity of care required by hemodialysis patients whose health conditions are constantly changing and require nursing interventions, it was chosen to evaluate the ND listed by nurses based on the philosophical-theoretical framework proposed by Horta. Because it is believed that only in this way, individualized care plan may build based on interventions aimed to satisfactory clinical results, from the technical-scientific and humanistic competence present in nursing care, providing patient safety and autonomy of the nurse.^{1,7}

The relevance focuses on the fact that the recognition of nursing diagnoses and facilitate the association between clinical and nursing care can direct the creation of specific protocols for nursing care and as a change of vehicle and transformation clinical practice. Still, the small number of studies related to the theoretical, philosophical evaluation of nursing diagnoses attributed to hemodialysis patients score. Thus, the aim is to broaden the scope of literature on the implementation of Horta Theory as a subsidy for the nursing diagnosis.^{1,5-7}

The study is justified to contribute to the nurse's reflection on the NP. It is a strategy that allows the nurse to dispense care, win their independence and space, and to break the dichotomy between what is recommended and what is done in the nursing every day. Thus, it contributes to the growth and substantive development of nursing care. The objective is to discuss the theoretical, philosophical aspects underlying the nursing diagnoses formulated for hemodialysis patients according to Horta Theory.⁵

• Horta Theory

In Brazil, SAE began with studies of Wanda de Aguiar Horta and in recent decades nurses have earned not only a model but also a language and legislation, as well as political, ethical and charitable commitments. In the midst of SAE's development there is the motto that nursing is understood as the art of caring, being a science whose essence and specificity is human care, directed to the individual, the family and in a comprehensive and holistic community and that while profession, it embraces care as an instrument of action. Given this understanding, these are the founding elements of Horta Theory.⁵⁻⁶

This theory is based and encompasses three general laws governing the universal phenomena: the law of balance (the entire universe is maintained by dynamic equilibrium

processes among its human beings); the law of adaptation (all universe human beings interact with their external environment always looking for ways to adjust to staying in balance); the law of holism (the universe is a whole, the human being is a whole, the cell is a whole, all this is more than a sum of the constituent parts of each human being). The interrelationship of these laws establishes the amalgam of this theory.⁵

The Horta theory is based on Maslow's Theory of Human Motivation whose primary concept is the hierarchy of Basic Human Needs (BHN). They are arranged in five levels of priorities, outlined the most basic to the most complex: physiological, safety and security, love and gregariousness, self-esteem and self-actualization needs. In nursing, João Mohana proposition is used that ranks the BHN in psychobiological, psychosocial and psycho-spiritual.⁵

The psychobiological are aspects necessary for life from the biological point of view and constitutes the basis on which other BHN will be based. It is the most elementary level to be cared for by nurses in nursing care offering. Psychosocial reflects aspects of the human present in the patient from the relationships and social interactions and, finally, the psycho-spiritual expresses the religious or theological dimension, ethics and worldview, assumed by the patient. In this classification, the last dimension is distinctive of human beings.⁵

In the assistance plan, the use of this theory will help nurses attitude to move him to the provision of nursing care that includes these three areas, realizing that they form the indivisible whole of the patient.⁵⁻⁷

METHOD

Descriptive and exploratory study with a quantitative approach performed in the hemodialysis unit in a public hospital school, located in Belo Horizonte, Minas Gerais, Brazil. The unit assists approximately 120 people a month and has a multidisciplinary team where there are six nurses, three of them being experts in nephrology.

Data collection was conducted from October 1 to November 30, 2010, through hospital records of patients. In this period there were 120 people in attendance, 78 of them held hemodialysis three times a week, lasting an average of four hours. Inclusion criteria were adults of both genders; 18 years old or older to 60 years old; in treatment for at least ninety days. The sample consisted of 42 people, representing 53.8% of hemodialysis individuals.

Experts nurses were responsible for the elaboration of the nursing history and the ND formulation in their respective shifts from the Taxonomy II North American Nursing Diagnosis Association (NANDA). A data collection instrument to record the information contained in the medical records of patients on socio-demographics and a list of problems from the history and nursing diagnoses were prepared. Data analysis was performed using descriptive statistics and discussed based on the philosophical framework of Horta theory and scientific literature.^{5,7 to 8}

The study project was approved by the Ethics Committee of the Federal University of Minas Gerais/UFMG, in the opinion paragraph 0292.0.203.000-10 on 09/02/2010. The research is by Resolution 196/96, revoked by Resolution 466/12 of the National Health Council, protecting the anonymity of people on treatment and professionals who have developed the nursing diagnoses.

RESULTS

Among the 42 patients on hemodialysis, there was 62% male, ages ranged between 20 and 59 years old, 55% were single and 57% Catholic Christians. Regarding the level of education, 55% had an elementary school and 3% higher education. On the etiology of chronic kidney disease (CKD), it was found that 36% had hypertensive nephropathy, and 5% had polycystic kidney (Table 1).

Table 1. Distribution of the sample according to the etiology of chronic kidney disease

Etiology	n=42	%
Nephropathy hypertensive	15	36
Glomerulonephritis	14	34
Diabetic nephropathy	4	9
Reflux of urinary vesicle nephropathy	4	9
Polycystic kidney	2	5

There were 17 titles identifying nursing problems with a predominance of psychobiological BHN (76%), followed by psychosocial (24%). Among the nursing problems classified as affected psychobiological BHN, there were: anuria (100%); loss of skin integrity by multiple venous punctures (98%), liver enzyme abnormalities (31%), altered sleep pattern (24%) and excessive water intake (20%). Nursing problems classified as affected psychosocial BHN included failure to comply with the treatment regimen (26%), irritability and excessive concern (20%), trouble reporting and speech difficulties (5% respectively).

From the list of nursing problems, nine nursing diagnoses were formulated (Figure 1).

They were classified as potential (n=5) and real (n=4). The potential diagnoses were the risk of infection, electrolyte imbalance and vascular trauma shown by 42 patients; the liver function risk affected by 13; unstable blood sugar by 10. As for the real diagnoses, anxiety was identified in 30 patients; the excessive volume of liquid by 11; insomnia by 10 and pain by 15.

Also the nursing diagnoses were classified according to Horta's theory for basic human needs psychobiological affected (n=7; risk of infection, risk of electrolyte imbalances, risk of vascular trauma, risk of impaired liver function, unstable blood sugar risk acute pain, excessive volume of liquid), psychosocial (n=2; insomnia and anxiety) and psycho-spiritual (n=0).

Nursing diagnosis	Related factors or risk factors	Defining characteristics	Human needs
Risk infection	Invasive procedure: venipuncture Chronic disease Inadequate secondary defenses	-	Psychobiological
Electrolyte imbalance risk	Renal dysfunction	-	Psychobiological
Vascular trauma risk	Speed infusion	-	Psychobiological
Impaired liver function risk	Viral infection	-	Psychobiological
Unstable blood sugar risk	Inadequate blood glucose monitoring Food intake	-	Psychobiological
Acute pain	Verbal report	Harmful agents (biological and psychological)	Psychobiological
Excessive volume of liquid	Excessive liquid intake	Distensão da veia jugular	Psychobiological
Insomnia	Anxiety Fear	Reports of non-restorative sleep difficulty falling asleep	Psychosocial
Anxiety	Situational crisis (weight gain in a short period)	Inadequacy feeling Irritability	psychosocial

Figure 1. Distribution of nursing diagnoses according to related factors, risk factors, defining characteristics and basic human need affected.

DISCUSSION

The predominance of male patients aged between 50 and 59 years was found; However, on the world stage, more than half of those undergoing hemodialysis are over 65 years old. Considering the aging of the population, it can be inferred that in the future there will be increased hemodialysis in the elderly

population. This fact should arouse the nurse to care for this people from the recognition of their peculiarities. This is because the elderly on hemodialysis possess unique clinical features that should be considered; in general, they have more comorbidities requiring more hospitalization, consuming more drugs and proportionally using more health services than the younger population.⁹

However, despite the increased number of elderly patients on hemodialysis and survival, information on the quality of life of these patients are scarce in the country. This fact leads to the need for studies that primarily address the most committed aspects of the associated quality of life to health in this group of patients so that they can guide interventions to improve the level of hemodialysis treatment in this population.⁹

Regarding education, most of them have an elementary education, a condition that favors the social vulnerability of the patient and may compromise their adherence to the therapeutic plan. These situations should awaken the nurse in his health educator role, aiming to meet the risk groups for chronic kidney disease and establishing actions to promote the delay of the progression of losing of kidney function.^{7,10-11}

As the etiology of CKD in the United States, the main cause is diabetic nephropathy, followed by arterial hypertension (AH) and glomerulopathy. Brazil data show hypertensive nephropathy, followed by diabetic nephropathy, chronic glomerulonephritis and polycystic kidney as the main causes. In this study, hypertensive nephropathy was the main cause of CKD.⁷

The list of nursing problems (n=17) referred to the fields for disposal and return, safety/protection, comfort, nutrition, activity and rest, perception/cognition and health promotion. Thus, they were classified according to basic human needs (BHN) of affected psychobiological (n=13) and psychosocial nature (n = 4).^{5,8}

It should be noted that the nurse did not elaborate nursing diagnoses for psycho-spiritual needs (n=0). His vision care valued the BHN affected psychobiological (n=7) and psychosocial (n=2). This situation highlights the influence that founded the course, especially grounded in the biologicist paradigm.¹²

Obviously, the importance of the biological aspect is not ignored as founding and sustaining of human life. However, it is shared with Horta that life does end with him, because the patient aspires to be worth more, that is, to be recognized as people.¹³

The data proved to be a trend of nurses who work in nephrology highlighting the psychobiological aspects to the detriment of psychosocial and psycho-spiritual (n=0). This fact is the fruit of knowledge of the area of nursing based increasingly on advances in science, to search for the best available scientific evidence, reached from the results

derived research, especially of the graduate courses nationwide and worldwide.¹²

In this nursing course, the knowledge of the health versus disease and the nursing process are built, using a scientific technique vision. This perspective is philosophically grounded, especially marked by the separation of knowledge from the objectivity and subjectivity. Therefore, the biologicist aspect is considered foundational to the healthcare practice.¹²⁻¹³

The biologicist paradigm emerged in the mid-nineteenth century, from the development of positivism. For this philosophical current, science is objective and human subjectivity is not valued. Thus, health professionals have built their knowledge of the body, disease, symptomatology, therapy and care using a technical-scientific view. In this way, in the hemodialysis environment, it is evident the Cartesian biomedical model, determined by the expertise, technical enhancement, and manipulation technologies. Such an environment requires constant nurse's ability to renew its technical and theoretical knowledge, as well as a thorough (re) thinking and a critical, reflective and participatory posture.¹²⁻¹³

Thus, the influence of biologicist paradigm was evidenced in this study because of the complexity founded on human existence, the nurse undersized the titles of nursing problems for psychosocial and psycho-spiritual basic human needs.^{5,13}

This undersized is ideological because it aims to maintain professional in alienation state to identify the BHN affected in the psychosocial and psycho-spiritual fields. In this way, they keep "hidden" social, political and economic variables working to determine the adverse conditions for the maintenance, promotion, and management of the health of CKD patients on hemodialysis and community. It is also considered the respective political role of nurses in addressing the paradoxes that underlie public health policy.^{5,14-18}

Also, the political role required to the nurse is directly rooted in disruption perspective of the biomedical model that influences the profession. This assertion has foundation on the premise that the concept of reality based only on the medical rationality standards, coming from the biologicism is not aware of the many issues surrounding human patient. Thus, to obtain appropriate responses to the binomial health versus disease, it is necessary to change the way of thinking about nursing care to be given to the hemodialysis patients, with the principle understanding and

meeting the basic human needs in the psychosocial and psycho-spiritual aspects.^{5,19}

Uncontested fact is that nursing by the characteristics of the object and purpose of work uses different instruments to dispense the nursing care given to the patient's needs undergoing hemodialysis and population. However, lack of social recognition for their way of being, doing and knowing, which requires their consideration and inclusion in the socio-political context. From the standards of empirical, ethical, aesthetic and personal knowledge, there is the concern about nursing practice in the political context of health.²⁰

Besides the disregard for subjectivity, another relevant aspect of the biologicist paradigm is the anthropological concept that it claimed. In it, the human being is perceived as man-machine, implying that the loss of health condition of the individual is identified as an operational failure. Therefore, subject to correction, maintenance, and adjustment. Therefore, it is inferred that the state of alienation experienced by nurses should not be analyzed from the perspective of lack of skills or expertise to identify problems and formulate nursing diagnostics that are beyond the psychobiological sphere but is rooted in the vision deformed about the human dimension in his social, political and ethical aspects.^{12,21}

Overcoming the biologicist paradigm inherited, it will provide the nurse awareness awakening to the recognition of the subjective dimension that is the patient, giving him the possibility to identify nursing problems grounded in psychosocial and psycho-spiritual basic human needs. This action will provide the transformation of his worldview and the establishment of diagnostic formulations for these needs, allowing him to develop valuable nursing prescription for the patient with the care of CKD on hemodialysis as a person.^{5,14,22}

In this way, it is up to the nurse in the exercise of the nursing process to remain in critical and reflective attitudes. Just like that, he can overcome the hegemonic biologicist vision influencing the profession and will reaffirm the completeness of the patient, valuing not only the psychobiological BHN but the psychosocial and psycho-spiritual. Thus, he reintegrates that science splits and a new anthropological concept of holism are assumed. In it, the man is a dynamic whole in constant interaction with the environment. Such an enterprise starts from birth to death. This concept is the core element in the theory of Horta and should be the support used by

nurses who work in hemodialysis to give direction to their care practice.^{5,14,17}

CONCLUSION

There were nine nursing diagnoses formulated, ranked for basic human needs affected of psychobiological (n=7) and psychosocial (n=2), to the detriment of psycho-spiritual aspect (n=0). This situation reflects the influence of the biologicist paradigm in nursing education. In it, the very notion of life is confined to the foundational aspects and ignores all the subjective dimension of the patient.

It is noteworthy that this foundation is the result of a worldview centered on the technical and scientific aspects of positivist nature. In the past century, humanity has witnessed the serious risks that this paradigm can bring, notably considering the objectification process of the human being, this positioning based on the anthropological concept man-machine that goal this perspective. The highlighted atrocities in the concentration camps and scientific experiments carried out there involving human subjects show that the commodification process the other can bring to humanity and to develop nursing substantive emptying of the Being-patient.

Therefore, it is argued that overcoming this paradigm will provide nurses awareness awakening that acts on hemodialysis, allowing them to recognize the subjective dimension that establishes the patient, moving them to the development of a practice of human and caring nursing, in addition to technical and ensuring their scientific aspect.

They will value the fulfillment of basic human needs in the psychobiological, psychosocial and psycho-spiritual dimensions, from the identification of problems and nursing diagnoses formulations that will give the direction concatenated and substantive results and nursing interventions. Thus, nursing care will have greater significance for the patient, and the nurse will recognize him as a person, confirming the value of Horta theory for pragmatics of nursing.

REFERENCES

1. Souza NR, Costa BMB, Carneiro DCF, Barbosa HSC, Santos ICRV. Systematization of nursing care: difficulties referred by nurses of a university hospital. J Nurs UFPE on line [Internet]. 2015 [cited 2015 June 10];9(2):7104-10. Available from: <http://www.revista.ufpe.br/revistaenfermage>

[m/index.php/revista/article/view/6337/pdf_7398](http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/6337/pdf_7398)

2. Salvador PTCO, Alves KYA, Ribeiro JLS, Martins CCF, Santos VEP, Tourinho FSV. The systematization of nursing care as instrument of empowerment: integrative review. J Nurs UFPE on line [Internet]. 2015 [cited 2015 June 10];9(5):7947-56. Available from: http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/6155/pdf_7853

3. Rodrigues TA, Botti NCL. Providing and receiving nursing care during hemodialysis. Acta Paul Enferm [Internet]. 2009 [cited 2015 Jan 20];22(Especial-Nefrologia):528-30. Available from: http://www.scielo.br/pdf/apv/v22nspe1/en_15.pdf

4. Conselho Federal de Enfermagem. Resolução COFEN n. 358, de 15 de outubro de 2009. Dispõe sobre a Sistematização da Assistência de Enfermagem e a implementação do Processo de Enfermagem em ambientes, públicos ou privados, em que ocorre o cuidado profissional de Enfermagem, e dá outras providências. [Internet]. 2009 [cited 2015 June 10]. Available from: http://novo.portalcofen.gov.br/resoluco-cofen-3582009_4384.html

5. Horta WA. Processo de Enfermagem. São Paulo: EDUSP; 2005.

6. Silva CFM, Motta E, Ribeiro EDLM, Santos WJ, Chaves RRG. Sistematização da assistência de enfermagem: percepção dos enfermeiros. Rev Enferm UFPI [Internet]. 2015 [cited 2015 June 10];4(1):47-53 Available from: <http://www.ojs.ufpi.br/index.php/reufpi/article/view/2063/pdf>

7. Guimarães GL, Mendoza IYQ, Goveia VR, Baroni FCA, Godoy SCB, Matos SS. Nursing diagnoses in hemodialysis based on Horta's theory. J Nurs UFPE on line [Internet]. 2014 [cited 2015 June 10];8(10): 3444-51. Available from: http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/6588/pdf_6293

8. North American Nursing Diagnosis Association. Diagnósticos de Enfermagem da NANDA: definições e classificação (2009-2011). Porto Alegre: Artmed; 2010.

9. Braga SFM, Peixoto SV, Gomes IC, Acúrcio FA, Andrade EIG, Cherchiglia ML. Fatores associados com a qualidade de vida relacionada à saúde de idosos em hemodiálise. Rev Saúde Pública [Internet]. 2011 [cited 2015 June 10];45(6):1127-36. Available from:

<http://www.scielo.org/pdf/rsp/v45n6/2844.pdf>

10. Santos PR. Relação do sexo e da idade com nível de qualidade de vida em renais crônicos hemodialisados. Rev Assoc Med Bras [Internet]. 2006 [cited 2015 June 10];52(5):356-9. Available from: <http://www.scielo.br/pdf/ramb/v52n5/a26v52n5.pdf>

11. Azevedo DF, Correa MC, Botre L, Mariano RM, Assis RR, Grossi L, et al. Sobrevida e causas de mortalidade em pacientes hemodialíticos. Rev Med Minas Gerais [Internet]. 2009 [cited 2015 June 10];19(2):117-22. Available from: <http://www.rmmg.org/artigo/detalhes/461>

12. Nunes MB, Santos EM, Leite MI, Costa AS, Guihem DB. Epidemiological profile of chronic kidney patients on dialysis program. J Nurs UFPE on line [Internet]. 2014 [cited 2015 June 10];8(1):69-76. Available from: http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/5398/pdf_4410

13. Valença CN, Santos RCA, Medeiros SM, Guimarães J, Germano RM, Miranda FAN. Reflexões sobre a articulação entre o *homo faber* e o *homo sapiens* na enfermagem. Esc Anna Nery Rev Enferm [Internet]. 2013 [cited 2015 June 10];17(3):568-72. Available from: <http://www.scielo.br/pdf/ean/v17n3/1414-8145-ean-17-03-0568.pdf>

14. Santos QG, Azevedo DM, Costa RKS, Medeiros FP. A crise de paradigmas na ciência e as novas perspectivas para a enfermagem. Esc Anna Nery Rev Enferm [Internet]. 2011 [cited 2015 June 10];15(4):833-7. Available from: <http://www.scielo.br/pdf/ean/v15n4/a24v15n4.pdf>

15. Peres LAB, Biela R, Herrmann M, Matsuo T, Ann HK, Camargo MTA, et al. Epidemiological study of end-stage renal disease in western Paraná. An experience of 878 cases in 25 years. J Bras Nefrol [Internet]. 2010 [cited 2010 July 18];32(1):49-54. Available from: http://www.scielo.br/pdf/jbn/v32n1/en_v32n1a10.pdf

16. Pires D. A enfermagem enquanto disciplina profissão e trabalho. Rev Bras Enferm [Internet]. 2009 [citado 2013 out 3];62(5):739-44. Available from: <http://www.scielo.br/pdf/reben/v62n5/15.pdf>

17. Lata AGB, Albuquerque JG, Carvalho LASBP, Lira ALBC. Nursing diagnosis in adults on hemodialysis. Acta Paul Enferm [Internet]. 2008 [cited 2013 Mar 20];21(spe):160-3.

Available from:
http://www.scielo.br/pdf/ape/v21nspe/en_a04v21ns.pdf

18. Frazão CMFQ, Araújo AD, Lira ALBC. Implementation of nursing process to the patient submitted to hemodialysis. J Nurs UFPE on line [Internet]. 2013 [cited 2014 Feb 20];7(spe):824-30. Available from: http://www.revista.ufpe.br/revistaenfermage/index.php/revista/article/view/3335/pdf_2241

19. Lima FET, Moraes VS, Coelho ELM, Neves FMO, Melo EM, Barbosa IV. Implementation of nursing process to patients with chronic renal failure on hemodialysis treatment. J Nurs UFPE on line [Internet]. 2012 [cited 2014 Feb 20];6(9):2167-76. Available from: http://www.revista.ufpe.br/revistaenfermage/index.php/revista/article/view/3174/pdf_1461

20. Backes DS, Backes MS, Erdmann AL, Büscher A, Salazar-Maya AM. Significado da prática social do enfermeiro com e a partir do Sistema Único de Saúde brasileiro. Aquichan [Internet]. 2014 [cited 2015 June 10];14(4):560-70. Available from: <http://www.redalyc.org/articulo.oa?id=74133057010>

21. Persegona KR, Rocha DLB, Lenardt MH, Zagonel IPS. O conhecimento político na atuação do enfermeiro. Esc Anna Nery Rev Enferm [Internet]. 2009 [cited 2015 June 10];13(3):645-50. Available from: <http://www.scielo.br/pdf/ean/v13n3/v13n3a27.pdf>

22. Burmeister JE, Campos JF, Miltersteiner DR. Efeito de diferentes níveis de glicose no dialisato sobre o risco de hipoglicemia durante hemodiálise em pacientes diabéticos. J Bras Nefrol [Internet]. 2012 [cited 2015 June 10];34(4):323-7. Available from: <http://www.scielo.br/pdf/jbn/v34n4/v34n4a03.pdf>

23. Santos RLG, Oliveira DRF, Nunes MGS, Barbosa RMP, Gouveia VA. Evaluation of the knowledge of chronic renal patients in conservative treatment about dialytic modalities. J Nurs UFPE on line [Internet]. 2015 [cited 2015 June 10];9(2):651-60. Available from: http://www.revista.ufpe.br/revistaenfermage/index.php/revista/article/view/7360/pdf_7168

Submission: 2015/09/22

Accepted: 2016/01/06

Publishing: 2016/02/01

Corresponding Address

Gilberto de Lima Guimarães
Universidade Federal de Minas Gerais
Escola de Enfermagem
Departamento de Enfermagem Básica
Av Professor Alfredo Balena, 190, sala 214
CEP 30130-100 – Belo Horizonte (MG), Brazil