



RESEARCH ARTICLE

OPEN ACCESS

PROFILE OF PEOPLE WITH CHRONIC KIDNEY DISEASE IN HEMODIALYTIC TREATMENT IN A CAPITAL OF BRAZIL

¹Anelise Nogueira de Lima, ^{*1}Douglas Moraes Campos, ¹Wherveson de Araújo Ramos, ²Natã Silva dos Santos, ¹Matheus dos Santos Passo, ¹Gustavo de Almeida Santos, ¹Matheus Aquino de Assis Silva, ¹Thailane Maria Silva Santana, ¹Mariana Borges Sodr e Lopes and ²R mulo Dayan Camelo Salgado

¹Federal University of Maranh o (UFMA), Imperatriz – MA, Brazil

²Federal University of Tocantins (UFT), Aragua na – TO, Brazil

³Maranh o Unified Education Center (UNICEUMA), Imperatriz – MA, Brazil

ARTICLE INFO

Article History:

Received 12th June, 2019

Received in revised form

15th July, 2019

Accepted 19th August, 2019

Published online 30th September, 2019

Key Words:

Chronic Kidney Disease,
Dialysis, Epidemiology.

ABSTRACT

Objective: To determine the sociodemographic and clinical profile of patients with chronic kidney disease undergoing hemodialysis in Campo Grande City– Mato Grosso do Sul, Brazil. **Method:** An exploratory, descriptive, cross-sectional study with a quantitative approach, conducted with 120 participants, chosen for convenience, voluntarily undergoing hemodialysis treatment in the nephrology department of a university hospital and in three hemodialysis clinics in the municipality. **Results:** The data revealed that 56.7% were male, with an average age of 51.5 years, 65.0% in stable union. The average time of hemodialysis was 3 and 4 years. Among the affected activities, it was noticed that insomnia (56.6%), changes in eating habits (73.3%) and decrease in professional performance or daily activities (61.6%) were the most evidenced by the investigated ones. **Conclusion:** The data found may support discussions among health professionals to improve the quality of life of those involved.

Copyright   2019, Anelise Nogueira de Lima et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Anelise Nogueira de Lima, Douglas Moraes Campos et al. 2019. "Profile of people with chronic kidney disease in hemodialytic treatment in a capital of Brazil", *International Journal of Development Research*, 09, (09), 29984-29988.

INTRODUCTION

Chronic Kidney Disease (CKD) has been progressively increasing worldwide, becoming a serious public health problem in Brazil, due to its increasing prevalence. It is characterized as acute reduction of renal function in hours or days. Indicated mainly for decreasing glomerular filtration rate and / or urinary volume, however, disturbances also occur in the control of acidobasic and hydroelectrolytic balance (SBN, 2014; SESSO et al., 2017). In addition, it alters the daily life of its bearer, since it consists of a progressive and irreversible injury and loss of renal functions, and is also marked as a social problem, due to the fact that it interferes with its role in society. Thus, a long process of adaptation to this new condition is established, in which the individual needs to identify means to deal with the renal problem and with all changes and limitations (SIVIERO et al., 2014).

In Brazil, according to the Brazilian Society of Nephrology (SBN), the estimated number of dialysis patients in Brazil was 122 825 people. The estimated number of patients who started treatment in 2016 in Brazil was 39,714, corresponding to an incidence rate of 193 patients by millions of the population (pmp). The annual gross mortality rate was 18.2% corresponding to a total of 22,337 deaths (SESSO, 2017). It is noteworthy that CKD does not include an expectation of cure, but the maintenance of chronicity subjecting the patient to renal replacement therapy modalities. After diagnosis of the disease, the modalities of Renal Replacement Therapy (RRT) are available: hemodialysis, peritoneal dialysis and transplantation (PERES, 2011). In quantitative terms, in Brazil, hemodialysis (HD) stands out as a treatment modality, since about 90% of patients on renal replacement therapy perform this option. HD is usually performed in sessions of three times weekly, with an average duration of 4 hours (SESSO, 2010). Hemodialysis treatment is seen as a major source of stress and can lead to problems such as social

*Corresponding author: Anelise Nogueira de Lima,
Federal University of Maranh o (UFMA), Imperatriz – MA, Brazil

isolation, job loss and, consequently, social security, partial or total impossibility of mobility, decreased physical activity, need to adapt to loss of autonomy and also an ambiguous feeling between fear of living and dying, making the patient fragile and weakened emotionally (HYPHANTIS, 2010). The quality of the entire hemodialysis process is influenced by the care, socioeconomic and clinical aspects of the patients. At this point, knowing the characteristics of the population in HD should be a current and persevering goal of health professionals and society (LOPES and SANTOS, 2010). Given the above, the present study aimed to determine the epidemiological profile, regarding the sociodemographic and clinical aspects of patients with chronic kidney disease undergoing hemodialysis treatment in the city of Campo Grande - Brazil.

MATERIALS AND METHODS

Exploratory, descriptive and cross-sectional study with quantitative approach, conducted from January to March 2014, whose sample was 120 participants, chosen for convenience, voluntarily and according to their availability, in hemodialysis treatment in the nephrology sector of a university hospital and in three hemodialysis clinics in the city of Campo Grande, being part of the results a master's dissertation entitled: Nursing diagnoses and interventions related to the quality of life of people on hemodialysis treatment. Inclusion criteria were: being 18 years of age or older, with a clinical diagnosis of CKD, on dialysis treatment, in full control of their mental capacity. Data collection was performed through the application of an instrument developed by the researcher herself with questions that addressed the sociodemographic characteristics (gender, age, marital status, origin, education, occupation and family income) and clinical (time of treatment, affected activities and queuing for transplantation). The questionnaire was applied by the researcher herself, since the individuals, at the time of data collection, were in hemodialysis session, which could make it difficult to read and complete the instrument by themselves. For the analyzes were used three statistical tests, being the test of differences of average, correlation analysis and Analysis of Variance (ANOVA). The research was conducted after the approval by the Ethics Committee in Research (ECR) with Human Beings, linked to Federal University of Mato Grosso do Sul (UFMS), according to Resolution 466/12, of the National Health Council. It was submitted on 04/15/2013, and obtained approval in 04/26/2013 through the protocol 256.597 / 2013, according to the opinion of the ECR.

RESULTS

It was found that the majority of respondents are male (56.7%), the average population studied was 51.5 (ranging from 18 to 74) years of age, with a predominant age group of 35 to 55 years. Regarding marital status 65.0% of chronic nephropaths lived with their respective partners in stable union, according to Table 1. Regarding education, when analyzing Table 1, it can be noted that 80.8% of those surveyed have only elementary school, which confirms the inadequate level of education among the people studied. Another relevant aspect is that 53.3% of respondents are away from work/sick leave, while 46.7% are retired. Regarding professional performance, 61.6% reported a decrease. Economically, it was found that 62.5% of respondents reported receiving a minimum

salary. Regarding origin, 82.5% of the individuals surveyed are from the city of Campo Grande, capital of the state of Mato Grosso do Sul - Brazil, a reference place for more complex health care, especially regarding chronic diseases, such as hemodialysis treatment. The sociodemographic characteristics of the participants are elucidated in Table 1.

Table 1. Sociodemographic characterization of chronic renal patients on hemodialysis, Campo Grande - Brazil, 2013
Source: Research Data, 2014

Variables	f	%	
Gender	Male	68	56,7
	Female	52	43,3
Age	18 35	20	16,7
	35 55	47	39,2
	55 70	40	33,3
	70 or more	13	10,8
Stable Union	Yes	78	65
	No	42	35
Provenance	Campo Grande	99	82,5
	Inland	21	17,5
Schooling	No formal study	4	3,3
	Elementary	97	80,8
	Higher	10	8,3
Occupation	Retired	56	46,7
	Away from work / sick leave	64	53,3
Salary income *	Up to 1 min. sal	75	62,5
	More than 1 min. sal	45	37,5

*Minimum salary - Brazil, 2014 (MS): R\$ 724.00.

After obtaining the characterization of the study population, questions related to the time of treatment and the activities affected due to the chronicity of the disease were investigated, as shown in Table 2. Regarding the duration of HD treatment, the predominant one was between 3 and 4 years. Regarding the interference of HD in leisure and recreation of the chronic kidney, 45.8% of patients reported that it occurred in their lives. Regarding physiological activities, it was noted that 73.3% reported changes in eating habits due to dietary restrictions imposed by the disease (Table 2). When asked if there were any changes in their eating habits, 32 (26.7%) reported that "they were not concerned with what they ate because the machine took everything away". Thought considered risky, so health professionals, especially nurses, should conduct educational actions more frequently in order to promote better awareness regarding the care needed to live with CKD, especially the importance of an adequate diet to maintain a satisfactory state of health, aiming at a better quality of life and thus preventing future complications (Table 2). Regarding sleep, 68 (56.6%) reported having insomnia, requiring the use of medications and 88 (73.3%) had decreased self-esteem, due to the conditions imposed by the disease. Regarding respondents' response to difficulty sleeping, some reported feeling body aches while others said they were very awake at night, and slept a little during the day (Table 2). It is important to consider that the limitations due to emotional aspects can be caused due to the abrupt physical, economic, social and family changes. It is important for the nurse to clarify the nursing care that favors sleep, such as discussing comfort measures with the person / family, teaching relaxation techniques, guiding the absence of noise followed by a calm and safe environment, pay attention to physical circumstances (pain, discomfort, sleep apnea, unobstructed airways) and advise on the use of warm compresses in the referred pain sites and make use of medications prescribed by the physician for such purposes. Such measures can provide well-being to the individual. Most respondents, 64.2% reported feeling calm during hemodialysis

sessions (Table 2). This proves to be a positive factor in the acceptance of the disease and the proposed treatment.

Table 2. Characterization of chronic renal patients on hemodialysis according to time of treatment, activities affected during the chronicity of the disease and transplantation queue. Campo Grande - Brazil, 2013

Variables		f	%	
Treatment Time	Less than 1 year	10	8,3	
	Between 1 and 2 years	13	10,8	
	Between 2 and 3 years	21	17,5	
	Between 3 and 4 years	34	28,3	
	Between 4 and 5 years	30	25	
Affected Activities	Insomnia	Yes	68	56,6
		No	52	43,3
	Changes in Eating Habits	Yes	88	73,3
		No	32	26,7
	Leisure Activity Changes	Yes	55	45,8
		No	65	54,2
	Change in Sexual Activity	Yes	45	37,5
		No	75	62,5
	Decreased Self-Esteem	Yes	88	73,3
		No	32	26,7
	Drop in job performance or everyday activities	Yes	74	61,6
		No	46	38,3
	During Hemodialysis	Worried	23	19,2
		Nervous	20	16,7
		Quiet	77	64,2
Transplant Queue	Yes	55	45,8	
	No	65	54,2	

Source: Research Data, 2014.

DISCUSSION

The result confirmed the estimate of involvement in which chronic kidney disease is increasingly high in men, as they seek less health services than women (BRAZIL, 2010). In this study, the distribution was equivalent, which led us to reflect on the social role of man. According to the SBN census, 36,548 patients who started dialysis treatment in 2014 were registered in Brazil (SBN, 2014). Regarding the age group, this study identified a predominance of 35 to 55. In France, the average age of incident dialysis patients is 70.2 (FRANCO *et al.*, 2012). It is also emphasized that population aging is one of the factors that justify the growth in the number of patients undergoing dialysis treatment today (SESSO, 2010). Out of the 120 participants, 20 (16.7%) were aged between 18 and 35 years, which showed that CKD has affected people in the reproductive and labor-intensive phase, affecting their production capacity and bringing greater dependence on government resources. According to the Brazilian Institute of Statistics (IBGE), it is believed that by 2025 Brazil will have the sixth largest elderly population on the planet, with 32 million people aged 60 and over, requiring preventive and health education measures for these people (BRAZIL, 2010). Such data revealed the problematic of the situation, in which the prevalence of patients maintained in chronic dialysis programs has almost doubled in the last eight years (TERRA *et al.*, 2010).

Stable union proved more prevalent in this research. A study conducted in a HD clinic in the city of Goiânia, Goiás - Brazil, which concluded that the presence of a fixed member or family member was considered positive, but that refers to the performance of habitual and routine activities related to physical aspects, sexual performance and impact of the effects of kidney disease (CORDEIRO *et al.*, 2009). It is noteworthy that, for the interviewees of this study, leisure was associated

with being with family, watching television and receiving friends at home, since outings for walks became more difficult. Family is fundamental, and all members should discuss and reflect, especially on the problems that involve the health issues of the family in dialysis treatment, as well as other issues such as the financial situation, leisure, the organization and planning of family functioning. The high proportion of individuals in stable union may be due to the presence of older age groups in the sample, which enables greater adherence of these patients to treatment, due to the social support of their spouse. The structured family context will play an important role in the patient's entire relationship process with his morbidity, treatment and adaptation to a new lifestyle (BRITTO and OLIVEIRA, 2009). It was also observed that 80.8% of the investigated have only elementary school. In a study conducted in the city of Dourados, Brazil, it was found that 63.16% of respondents had incomplete elementary school (SILVA *et al.*, 2011). It is important to mention that patients with higher education have intellectual resources capable of generating better emotional adaptation to the consequences of CKD and treatment (GUEDES and GUEDES, 2012).

It is important to note that education is a major factor, as it directly reflects on the assimilation of the information received. Thus, the data found may serve as a warning to health professionals regarding communication with these chronic renal patients, since it is necessary to use accessible language to ensure understanding, especially when it comes to guidance and / or health education for the prevention of treatment complications. Most of the interviewees were found to be away from work / sick leave. It should be noted that there are a large number of people in the economically productive phase of CKD among the Brazilian population undergoing dialysis treatment, according to the SBN (2014), where 66.4% of dialysis patients are between 19 and 64 years old. Such data reveal the severity of the situation in view of previous statistical data, as the disease is increasingly reaching the productive and reproductive age of the population. In the present study, no patient had a monthly income below one minimum salary. This result corroborates a study on quality of life, where 75.7% reported receiving up to one minimum salary and 25 (24.3%) receive a minimum salary, showing that CKD patients have a low socioeconomic level (FRAZÃO *et al.*, 2011). The average HD treatment was 3 to 4 years. In Dourados City, the average found was five years (SILVA *et al.*, 2011). In the Northeast of Brazil, the average duration of HD treatment was 3.3 ± 3.3 years, corroborating the findings of the present study, where the average age was composed of 3 to 4 years of HD treatment (CAVALCANTE *et al.*, 2013). CKD requires long-term treatment in which the performance of specific tasks may be hindered or even impeded by physical, cognitive limitations, pain and fatigue, which makes the employability rate lower than that of healthy people. which certainly contributes to the early exit of these individuals from the labor market, compromising their employability, family income and social insertion, which leads to a depressive state causing dissatisfaction and generating personal disorders. Importantly, when asked about this issue, most respondents showed feelings of disability as they wished to be working at the moment. This situation should be better assisted by public agencies as well as health professionals so that attention to the needs experienced by these people not only in the financial aspect, but also in the psychosocial, such as the presence of idleness followed by feelings of worthlessness and devaluation (OLIVEIRA, 2008). When asked if there were any changes in their eating habits, 32

(26.7%) reported that “they were not concerned with what they ate because the machine took everything away”. Corroborating these findings, a study with people undergoing hemodialysis treatment revealed that it is necessary to change eating habits and water restriction, as it is necessary to considerably reduce the consumption of water, sodium and potassium in order to prevent health problems during the course of the disease. as hypertension and acute pulmonary edema (SANTOS, 2011). Regarding sleep, 68 (56.6%) reported having insomnia, requiring the use of medications and 88 (73.3%) had decreased self-esteem, due to the conditions imposed by the disease. It should be borne in mind that limitations due to emotional aspects may be caused due to the abrupt physical, economic, social and family changes. Now, the need to attend dialysis centers, water and food restrictions, as well as changes in working hours and social life, makes the performance in daily activities decrease. Thus, the patient begins to live with a reality of “losses”, generating emotional instability (LIMA, 2014). It is important to highlight that, despite the technological advancement of hemodialysis treatment, which contributes to prolong the life of chronic kidney disease, this does not mean “to live well”, as there are almost always limitations on the participation in various leisure and recreation activities (SILVA *et al.*, 2011). As renal failure progresses, the patient goes through difficult situations based on loss of basic characteristics and quality of life (MAYAYO, 2010). Parallel to this factor, the increase in the time of hemodialysis treatment suggests a possible impairment of family relationships and due to interference in the emotional aspect of the subjects (TAKEMOTO, 2011).

Conclusion

CKD causes changes in lifestyle, body and behavioral changes, causing different feelings and attitudes in the individual, due to changes in physical capacity, self-esteem, body image and performing their daily activities. The sociodemographic clinical analysis of the present study showed that after the impact of the disease, the way in which the person cognitively processes the consequences caused by the disease, the personality profile of this person influences enormously in the course of treatment. It was also observed that the way each person lives and relates to CKD is always unique and personal. This study brought contents inherent to the dimensions that encompass the life of the human being, besides elucidating aspects that transcend positively or negatively in the unique and personal perception of the chronic renal individual. The results found in this research can be analyzed as interfering factors in the occurrence of CKD and treatment, considering the patients' socioeconomic characteristics, such as low family income and low level of education. In addition, this study demonstrates the need to promote interdisciplinary educational actions, addressing relevant aspects of treatment and self-care, in order to provide means of care aimed at better treatment adequacy, thus ensuring an improvement in quality of life.

REFERENCES

- BRASIL. Instituto Brasileiro de Geografia e Estatística (IBGE). Síntese de indicadores sociais: uma análise das condições de vida da população brasileira; 2010. Rio de Janeiro: IBGE; 2010.
- BRITTO RA, OLIVEIRA JS. As dificuldades de implantação e operacionalização da Sistematização da Assistência de Enfermagem – SAE em unidades hospitalares do interior da Bahia. 61º Congresso Brasileiro de enfermagem. Centro de Convenções do Ceará Fortaleza. 07 a 10 de dezembro de 2009.
- CAVALCANTE MCV, *et al.* Fatores associados à qualidade de vida de adultos em hemodiálise em uma cidade do nordeste do Brasil. *J. Bras. Nefrol.* [Online]. 2013, vol. 35, n.2, pp. 79-86.
- CORDEIRO JÁ, *et al.* Qualidade de vida e tratamento hemodialítico: avaliação do portador de insuficiência renal crônica. *Revista Eletrônica de Enfermagem, Goiânia*, v. 11, n.4, p. 785-793, 2009.
- FRANCO MTG, *et al.* Avaliação dos registros de enfermeiros em prontuários de pacientes internados em unidade de clínica médica. *Revista Acta paulista de enfermagem*. v.25, n.2, p. 163-170, 2012.
- FRAZÃO CMFQ, *et al.* Qualidade de vida de pacientes submetidos a Hemodiálise. *Revista de enfermagem da UERJ, Rio de Janeiro*, v. 19, n. 4, p. 577-82, out/dez, 2011.
- GUEDES KD, GUEDES HMG. Qualidade de vida do paciente portador de insuficiência renal crônica. *Revista Ciência & Saúde, Porto Alegre*, v. 5, n. 1, p. 48-53, jan./jun. 2012.
- HYPHANTIS T, *et al.* Ego mechanisms of defense are associated with patients' preference of treatment modality independent of psychological distress in end-stage renal disease. *Patient Preference and Adherence*, 2010; 4: 25-32.
- Lima, AN. Diagnósticos e intervenções de enfermagem relacionada à qualidade de vida de pessoas em tratamento hemodialítico. Dissertação (Mestrado em Enfermagem) – Instituto Integrado de Saúde. Universidade Federal do Mato Grosso do Sul, Campo Grande, 2014; 103 p.
- Lopes LMM, Santos SMP. Florence Nightingale – Apontamentos sobre a fundadora da Enfermagem Moderna. *Revista de Enfermagem Referência. III Série - n. 2 - Dez.* 2010.
- Mascarenhas CHM, Reis LA, Lyra JE, Peixoto AV, Teles MS. Insuficiência Renal Crônica: Caracterização Sociodemográfica e de Saúde de pacientes em tratamento Hemodialítico no município de Jequetibá (BA). *Revista Espaço para a Saúde*, 2010; 12 (1): 30-37.
- MAYAYO, María Mena *et al.* Asociación entre dependencia funcional y sintomatología afectivo-depresiva en pacientes en programa de hemodiálisis. *Enfermería Nefrológica*, 2010; 13 (4): 236-241.
- Oliveira SRT *et al.* Pesquisa científica relacionando os cuidados de enfermagem nas infecções respiratórias nas crianças de zero a cinco anos de idade em publicações na biblioteca Virtual em Saúde no período de 1998 a 2008. *Revista Eletrônica de Enfermagem do Centro de Estudos de Enfermagem e Nutrição*, 2008; 1 (1): 1-15.
- Ribeiro, RCHM *et al.* Caracterização e etiologia da insuficiência renal crônica em unidade de nefrologia do interior do Estado de São Paulo. *Acta paul. enferm.* [Online], 2008; 21: 207-211.
- Santos I, Rocha RPF, Berardinelli LMM. Necessidades de orientação de enfermagem para o autocuidado de clientes em terapia de hemodiálise. *Revista Brasileira de Enfermagem*, 2011; 64 (2): 335-42.
- SESSO, Ricardo Cintra *et al.* Brazilian Chronic Dialysis Survey 2016. *Jornal Brasileiro de Nefrologia*, 2017; 39 (3): 261-266.
- Silva AGI *et al.* Dificuldades dos estudantes de enfermagem na aprendizagem do diagnóstico de enfermagem, na perspectiva da metacognição. *Revista Escola Anna Nery*, 2011; 15 (3): 465-47.

- Silva GE. *et al.* Qualidade de vida do paciente renal crônico em tratamento hemodialítico em Dourados – MS. Revista *in*Formação, 2011; 15 (15): 99-110.
- Siviero PCL, *et al.* Insuficiência renal crônica no Brasil segundo enfoque de causas múltiplas de morte. Cad. saúde colet., 2014; 22 (1): 75-85
- Sociedade Brasileira De Nefrologia (SBN), *et al.* Censo de diálise, 2014.
- Takemoto AY, Okubo P, Bedendo J, Carreira L. Avaliação da qualidade de vida em idosos submetidos ao tratamento hemodialítico. Rev Gaúcha Enferm., 2011; 32(2): 256-62.
- Terra FS. *et al.* As principais complicações apresentadas pelos pacientes renais crônicos durante as sessões de hemodiálise. Minas Gerais: RevBrasClinMed, 2010; 8 (4): 306-310.
