Revista Brasileira em Promoção da Saúde
e-ISSN:1806-1230
Original Article
DOI: 10.5020/18061230.2019.9470

FUNCTIONAL HEALTH LITERACY AND THE KNOWLEDGE OF CHRONIC KIDNEY PATIENTS UNDER CONSERVATIVE TREATMENT

Letramento funcional em saúde e o conhecimento dos doentes renais crônicos em tratamento conservador

Alfabetización funcional en salud y el conocimiento de los enfermos renales crónicos en tratamiento conservador

Jullyane Rebeca Rodrigues da Silva
Clinical Hospital Federal University of Pernambuco *(Hospital das Clínicas da Universidade Federal de Pernambuco - HC/UFPE)* - Recife (PE) - Brasil

Givaneide Oliveira de Andrade Luz
Federal University of Pernambuco (*Universidade Federal de Pernambuco - UFPE*) - Recife (PE) - Brasil

Sibelly Morgana Barata da Silva
Federal University of Pernambuco (*Universidade Federal de Pernambuco - UFPE*) - Recife (PE) - Brasil

Lilian Katiussia Araújo de Medeiros
Clinical Hospital Federal University of Pernambuco *(Hospital das Clínicas da Universidade Federal de Pernambuco - HC/UFPE)* - Recife (PE) - Brasil

Jair Luiz Santos Júnior
Clinical Hospital Federal University of Pernambuco *(Hospital das Clínicas da Universidade Federal de Pernambuco - HC/UFPE)* - Recife (PE) - Brasil

Isabel Cristina Ramos Vieira Santos
University of Pernambuco (*Universidade de Pernambuco*) - Recife (PE) - Brasil

ABSTRACT

Objective: To evaluate the level of functional health literacy and knowledge about chronic kidney disease (DRC) in patients under conservative treatment. **Methods:** This is a cross-sectional, descriptive, and quantitative study carried out in a public reference hospital in Pernambuco, Brazil, in 2018. The sample, non-probabilistic for convenience, included 34 patients in the outpatient follow-up of DRC with conservative treatment. The following instruments were applied: sociodemographic questionnaire, clinical profile, questionnaire on the knowledge of the basic principles in the conservative treatment of DRC, and the B-TOFHLA test (Brief Test of Functional Health Literacy in Adults), to evaluate the level of functional health literacy (LFS). **Results**: It was found that the knowledge of 85.3% (n = 29) of the participants is sufficient concerning the basic principles of conservative treatment of DRC. Regarding the LFS, the inadequate level was prevalent in 14.7% (n = 5) of the participants. Regarding the association of the influence of literacy on knowledge about the treatment of DRC, there was greater knowledge in the group with adequate literacy (90.0%; n = 9), while in the group with inadequate literacy (borderline), the prevalence of sufficient knowledge was 83.3% (n = 20). It was also observed that, in addition to education, religion is also statistically relevant (p = 0.003; p = 0.048) for the adequate level of FHL in the studied group. **Conclusion:** Participants with DRC under conservative treatment obtained an inadequate level of functional health literacy and sufficient knowledge about the disease and treatment. These findings referring to knowledge point out that just transferring it to users is not enough for decisions that involve self-management of health.

Descriptors: Renal Insufficiency, Chronic; Health Literacy; Knowledge; Nursing.

RESUMO

***Objetivo**: Avaliar o nível de letramento funcional em saúde e o conhecimento sobre a doença renal crônica (DRC) nos pacientes em tratamento conservador. **Métodos:** Estudo transversal, descritivo e quantitativo realizado em um hospital público de referência em Pernambuco, Brasil, em 2018. A amostra, não probabilística por conveniência, incluiu 34 pacientes em acompanhamento ambulatorial de DRC com tratamento conservador. Aplicaram-se os instrumentos: questionário sociodemográfico, perfil clínico,*

Received on: *05/19/2019*
Accepted on: *11/21/2019*

questionário sobre o conhecimento dos princípios básicos no tratamento conservador da DRC e o teste B-TOFHLA (Brief Test of Functional Health Literacy in Adults), para avaliar o nível do letramento funcional em saúde (LFS). ***Resultados****: Verificou-se que o conhecimento de 85,3% (n=29) dos participantes é suficiente em relação aos princípios básicos do tratamento conservador da DRC. Em relação ao LFS, houve prevalência do nível inadequado em 14,7% (n=5) dos participantes. Em relação à associação da influência do letramento no conhecimento sobre o tratamento da DRC, verificou-se maior conhecimento no grupo com letramento adequado (90,0%; n=9), enquanto que, no grupo com letramento inadequado (limítrofe), a prevalência de conhecimento suficiente foi de 83,3% (n=20). Observou-se ainda que, além da escolaridade, a religião é também estatisticamente relevante (p=0,003; p=0,048) para o nível adequado de LFS no grupo estudado.* ***Conclusão****: Os participantes com DRC em tratamento conservador obtiveram nível inadequado de letramento funcional em saúde e conhecimento suficiente em relação à doença e ao tratamento. Esses achados referentes ao conhecimento apontam que apenas a transferência dele para os usuários não é suficiente para decisões que envolvem o autogerenciamento da saúde.*

Descritores*: Insuficiência Renal Crônica; Alfabetização em Saúde; Conhecimento; Enfermagem.*

RESUMEN

Objetivo*: Evaluar el nivel de alfabetización funcional en salud y el conocimiento de la enfermedad renal crónica (ERC) de enfermos en tratamiento conservador.* ***Métodos:*** *Estudio transversal, descriptivo y cuantitativo realizado en un hospital público de referencia de Pernambuco, Brasil, en 2018. La muestra fue no probabilística y de conveniencia con 34 enfermos en seguimiento en el ambulatorio de ERC con tratamiento conservador. Se aplicaron los instrumentos a continuación: el cuestionario sociodemográfico, el perfil clínico, el cuestionario sobre el conocimiento de los principios básicos del tratamiento conservador de la ERC y la prueba B-TOFHLA (Brief Test of Functional Health Literacy in Adults), para evaluar el nivel de alfabetización funcional en salud (AFS).* ***Resultados****: Se verificó que el conocimiento del 85,3% (n=29) de los participantes es suficiente respecto los principios básicos del tratamiento conservador de la ERC. Respecto la AFS hubo prevalencia del nivel inadecuado en el 14,7% (n=5) de los participantes. Sobre la asociación de la influencia de la alfabetización para el conocimiento del tratamiento de la ERC, se verificó más conocimiento en el grupo con alfabetización adecuado (90,0%; n=9) mientras que en el grupo con la alfabetización inadecuada (limítrofe), la prevalencia del conocimiento suficiente ha sido del 83,3% (n=20). Se observó aún que, además de la escolaridad, la religión también es estadísticamente relevante (p=0,003; p=0,048) para el nivel adecuado de AFS en el grupo estudiado.* ***Conclusión****: Los participantes con ERC en tratamiento conservador tuvieron el nivel inadecuado de alfabetización funcional en salud y el conocimiento suficiente respecto la enfermedad y el tratamiento. Eses hallazgos referentes al conocimiento apuntan que solamente su transferencia para los usuarios no es el suficiente para las decisiones que implica la auto gerencia en salud.*

Descriptores*: Insuficiencia Renal Crónica; Alfabetización en Salud; Conocimiento; Enfermería.*

INTRODUCTION

Chronic kidney disease (CKD), first seen in 1836[1], consists of a progressive and irreversible decrease in the regulatory, excretory, and endocrine activities performed by the kidneys. Renal function is assessed by measuring the glomerular filtration rate (GFR)[2].

When GFR reaches a value below 60 mL/min/1.73m² or persistent kidney injury for a minimum period of 3 months, the individual is considered to have CKD[3]. CKD staging is classified from stage 1 (mildest) to stage 5 (most severe). Stages 1 and 2 are considered lighter, present GFR> 60 mL/min/1.73m³ and the existence of kidney injuries must be proven. In stages 3, 4, and 5, the GFR is less than 60, 30, and 15 mL/min/1.73m³, respectively, thus being identified as the most serious stages[4].

CKD is a collective health problem on the world scene, and its incidence increases by about 8% per year[5]. This panorama is justified by the improvement in life expectancy and the resulting aging of the population, concomitantly with the increase in the number of patients with chronic non-communicable diseases (NCDs), such as systemic arterial hypertension (SAH) and diabetes mellitus (DM), and thus represents an exacerbated risk for the development of CKD[6].

In Brazil, the incidence and prevalence rates of CKD are growing at an accelerated rate. It is estimated that approximately 12 million Brazilians have some degree of renal impairment, although it is difficult to specify these figures concerning the initial stages of CKD, as they are related to underdiagnosis[7].

Early diagnosis is essential to optimize nephroprotective factors (diets, medications, control of metabolic disorders and comorbidities), to slow down the progression of CKD and delay or prevent the entry of this possible patient in renal replacement therapy (RRT). For this, CKD conservative treatment (CT) encompasses measures that are able to improve the survival of these patients by promoting health, preventing complications, early detection of decreased renal function, staging the disease and planning actions for RRT, if necessary[8]. The negligence of

these recommendations causes a decrease in the patients' quality of life, as it worsens clinical conditions by directly impacting the physical and psychological factors of the patients[9].

Thus, knowledge about the health condition is essential for effective self-management, which consists of the ability to carry out self-care and decide about treatment, to recognize and understand symptoms, to define goals and to relate positively with the health team[10].

Functional health literacy (FHL) is directly related to the above-mentioned skills, also revealing itself as a complex and multidimensional theme, which can be conceptualized as knowledge, encouragement, and ability to understand the information in the context of health and basic services, in addition to highlighting the ability to judge and decide on health care, promotion, and prevention[11].

In the scope of CKD, the adequate level of functional health literacy is potentially decisive in determining health outcomes, since the conditions that permeate the chronic kidney patient require sufficient literacy and numeracy skills to understand the information inherent to the disease and treatment[12].

In this context, the FHL becomes essential for understanding the guidelines in the disease and treatment context, since knowledge must be opportune to generate behavior change and positively interfere in the process of illness. Thus, being aware of the health condition is crucial to empower yourself and perform self-management, as it is only possible to decide about something known[13].

In Brazil, little is known about the levels of functional health literacy in patients with chronic kidney disease undergoing conservative treatment and the knowledge related to the disease and treatment[10]. Therefore, this study aimed to assess the level of functional health literacy and knowledge about chronic kidney disease in patients under conservative treatment.

METHODS

This is a cross-sectional, descriptive study with a quantitative approach[14] conducted at the Hospital das Clínicas of the Federal University of Pernambuco (HC-UFPE) from March to August 2018. This service includes the nephrology ambulatory care, which is a reference in Pernambuco, where patients with chronic kidney disease are monitored, under conservative treatment, in their various stages.

The sampling was non-probabilistic, for convenience, resulting in 34 participants followed by the Nephrology ambulatory care, which attends approximately two hundred (200) patients each month. Inclusion criteria were established: being 18 years of age or older, being a chronic kidney patient undergoing conservative treatment, being followed by the Nephrology ambulatory care of HC-UFPE for at least 6 months, literate (reading and writing skills) and do not have a visual deficit that would make it impossible to read the applied instrument. Patients with neurodegenerative disease, uncontrolled psychiatric disorders, and those who had previously undergone kidney transplantation were excluded.

Four questionnaires were used as instruments for data collection: the first encompasses sociodemographic characteristics; the second, the clinical profile; the third is a validated questionnaire, which contains questions about knowledge on the basic principles of conservative treatment of chronic kidney disease[15], and the fourth is the Brief Test of Functional Health Literacy in Adults (B-TOFHLA)[16], functional health literacy test.

The sociodemographic questionnaire investigated the following variables: name, date of birth, sex, marital/family status, educational level, family income, current occupation and profession, number of children, dependence on the caregiver to assist in the management of CKD and caregiver's education.

In order to trace the clinical profile of the research participants, the instrument included variables that concerned: underlying disease, time of conservative treatment, weight, height, comorbidities, number of consultations with a nephrologist, among others.

The questionnaire used to assess patients' knowledge of the basic principles of conservative CKD treatment consisted of 21 questions. Of those, 19 questions should be answered with "right", "wrong" and "I don't know", and the other 2 (two) question the drugs used and the cause of CK. To determine the knowledge level score each correct answer was worth one point and the wrong answers or those who did not know how to answer scored 0 (zero). In questions 20 and 21, open questions, the answers "totally correct" and "partially correct" were worth one point, while the answers considered wrong did not score.

Thus, the sum of the questionnaire is classified according to the percentage of correct answers: excellent knowledge (90 - 100%), good knowledge (80 - 89%), sufficient knowledge (70 - 79%), moderate knowledge (60 - 69%)

and insufficient knowledge (59% ou menos). For the overall calculation, two levels of knowledge were considered: sufficient knowledge (correct ≥ 70%) and insufficient knowledge (correct < 70%)[15].

To track the level of functional health literacy, a self-administered questionnaire, the B-TOFHLA test, was used, which was divided into two parts: the literacy assessment, consisting of two text passages, totaling 36 items; and numbering, composed of 4 items. The time to answer the items should not exceed 12 minutes. Each literacy question answered correctly counted two points, totaling 72 points. For numbering items, each hit counted 7 points, resulting in 28 points. For the general sum of FHL, it was classified as follows: inadequate FHL (0 - 53 points), marginal FHL (54 - 66 points), and adequate FHL (67 - 100 points)[16].

For data analysis, a base was built using the Statistical Package for the Social Sciences (SPSS) software, version 18, entered by double entry. The analysis of the socio-economic profile and the clinical profile occurred through the calculation of the percentage frequencies, with the construction of the respective frequency distributions. To compare the proportion of the evaluated percentages, the chi-square test was applied. Besides, the prevalence of participants was calculated as to knowledge about the basic principles in conservative treatment of chronic kidney disease, as well as the classification of the FHL.

About the assessment of the factors that influence the degree of knowledge about renal treatment and the classification of the FHL, contingency and the chi-square test tables for independence was constructed. In cases where the assumptions of the chi-square test were not satisfied, Fisher's exact test was applied. The significance level of 5% was considered in all analyses.

The research followed the ethical precepts, according to Resolution No. 466/12 of the National Health Council, and was approved by the Research Ethics Committee of the Federal University of Pernambuco, with Opinion No. 2,459,195.

RESULTS

Table I shows that, in the studied group, there is a predominance of females (n = 17; 85%), aged 60 or over (n = 10; 71.4%), brown (n = 14 ; 82.4%), married or in a stable relationship (n = 17; 81.0%), with studies up to complete / incomplete high school (n = 14; 87.5%), Catholic religion (n = 16; 88.9%), retired (n = 10, 76.9%), with family income between 1 to 2 minimum wages (MW) (n = 15; 93.8%) and coming from Recife and the Metropolitan Region (n=23; 85.2%). The proportion comparison test obtained a significant result in the following variables: education, religion, family income and origin, indicating that, in these factors, the profile described is, relevantly, the most present among the evaluated participants.

Next, in Table II, it can be seen that: the majority (n = 7; 20.6%) do not depend on a caregiver to manage the disease; 64.7% (n = 22) have SAH as the main underlying disease; 88.2% (n = 30) started conservative treatment more than a year ago; 41.2% (n = 14) have a normal body mass index (BMI) and 47.1% (n = 16) are in stage V of CKD. The proportion comparison test was significant in all the factors evaluated by pointing out that the profile described is, relevantly, the most frequent among the study group, except for the BMI factor, and indicates that the number of individuals with normal weight, overweight and obese is similar.

As a result of the distribution of the knowledge classification and the level of FHL of the evaluated participants (Table III), the majority (n = 29; 85.3%) have sufficient knowledge about the basic principles of conservative treatment of chronic kidney disease and present classification inadequate FHL (n=20; 58.8%). The proportion comparison test was significant in both factors evaluated (p=<0.001; p=<0.003).

Table IV shows the prevalence (90.0%; n = 9) of knowledge in the group with adequate literacy. The independence test did not show any significant result, indicating that there is no relevant change in the prevalence of knowledge among groups with adequate and limitrofe/inadequate literacy.

Table V shows the association of the sociodemographic profile with the level of the FHL and the classification of knowledge. Education and religion were determining factors for the level of literacy, showing that, in the group with complete / incomplete higher education, there is a higher prevalence of adequate literacy. For religion, the group with a belief other than Catholic and Evangelical has a higher level of literacy.

Table I - Socioeconomic profile of individuals with chronic kidney disease undergoing conservative treatment at a University Hospital in Recife, Pernambuco, 2018.

Variable	n	%	p-value[1]
Sex			
Male	14	41.2	0.303
Female	20	58.8	
Age			
26 to 45 years	8	23.5	0.439
46 to 59 years	12	35.3	
60 or over	14	41.2	
Race and color			
Brown	17	50.0	0.117
White	9	26.5	
Black	8	23.5	
Marital Status			
Single/widowed/separated	13	38.2	0.170
Married/stable relationship	21	61.8	
Education			
Fundamental incomp./comp.	15	44.1	
High school incomp./comp.	16	47.1	0.010
Superior incomp./comp.	3	8.8	
Religion			
Catholic	18	52.9	
Evangelical	14	41.2	0.002
Other	2	5.9	
Ocupation			
Formal	7	20.6	
Informal	7	20.6	0.365
Retired	13	38.2	
Unemployed	7	20.6	
Family Income			
Up to 1 MW	15	44.1	
1 to 2 MW	16	47.1	0.010
3 or more MW	3	8.8	
Origin			
Recife and MR	27	79.4	0.001
Other Regions of PE	7	20.6	

[1]p-value of the Chi-square test for comparison of proportions; Incomp: incomplete; comp: Complete; SM: Minimum wage; RM: Metropolitan region; PE: Pernambuco

Table II - Clinical profile of individuals with chronic kidney disease undergoing conservative treatment at a University Hospital in Recife, Pernambuco, 2018.

Variable	n	%	p-value
Depends on caregiver for disease management			
Yes	7	20.6	<0.001
No	27	79.4	
Base disease			
HAS	22	64.7	<0.001
DM	4	11.8	
Glomerulopathies	1	2.9	
Other	7	20.6	
Start of treatment			
Less than a year	4	11.8	<0.001
More than a year	30	88.2	
IMC			
Normal	14	41.2	0.625
Overweight	10	29.4	
Obese	10	29.4	
DRC staging			
Phase II	1	2.9	<0.001
Phase IIIa	1	2.9	
Phase IIIb	5	14.7	
Phase o IV	11	32.4	
Phase V	16	47.1	

[1]p-value of the chi-square test for comparison of proportions; SAH: systemic arterial hypertension; DM: diabetes mellitus; CKD: chronic kidney disease; BMI: body mass index

Table III - Distribution of the classification of knowledge and the level of functional health literacy of individuals with chronic kidney disease undergoing conservative treatment at a University Hospital in Recife, Pernambuco, 2018.

Variable	n	%	p-value[1]
Level of knowledge about basic principles in conservative treatment of chronic kidney disease			
Sufficient knowledge	29	85.3	<0.001
Insufficient knowledge	5	14.7	
Classification of B-TOFHLA			
Inadequate	20	58.8	<0.003
Limítrofe	4	11.8	
Adequate	10	29.4	

[1]p- value of the chi-square test for comparison of proportion; B-TOFHLA: *Brief Test of Functional Health Literacy in Adults*

Table IV - Classification of knowledge, according to the level of functional health literacy of individuals with chronic kidney disease undergoing conservative treatment at a University Hospital in Recife, Pernambuco, 2018.

Classification of B-TOFHLA	Knowledge of basic principles		p-value
	Sufficient	Insufficient	
Adequate	9(90.0%)	1(10.0%)	1.000[1]
Inadequate/limítrofe	20(83.3%)	4(16.7%)	

[1]p-value of Fisher's exact test; B-TOFHLA: *Brief Test of Functional Health Literacy in Adults*

Table V - Level of knowledge and classification of functional health literacy, according to sociodemographic profile, of patients with chronic kidney disease undergoing conservative treatment at the University Hospital of Recife, Pernambuco, 2018.

Variable		Knowledge of basic principles		B-TOHFLA	
		Sufficient	Insufficient	Adequate	Inadequate/ Limítrofe
Sex					
Male		12(85.7%)	2(14.3%)	4(28.6%)	10(71.4%)
Female		17(85.0%)	3(15.0%)	6(30.0%)	14(70.0%)
	p-value	1.000[1]		1.000[1]	
Age					
26 to 45 years		8(100.0%)	0(0.0%)	3(37.5%)	5(62.5%)
46 to 59 years		11(91.7%)	1(8.3%)	5(41.7%)	7(58.3%)
60 or over		10(71.4%)	4(28.6%)	2(14.3%)	12(85.7%)
	p-value	0.252[1]		0.242[1]	
Race and color					
Brown		14(82.4%)	3(17.6%)	5(29.4%)	12(70.6%)
White		9(100.0%)	0(0.0%)	4(44.4%)	5(55.6%)
Black		6(75.0%)	2(25.0%)	1(12.5%)	7(87.5%)
	p-value	0.395[1]		0.486[1]	
Marital status					
Single/widowed/ separated		12(92.3%)	1(7.7%)	4(30.8%)	9(69.2%)
Married/stable relationship		17(81.0%)	4(19.0%)	6(28.6%)	15(71.4%)
	p-value	0.627[1]		1.000[1]	
Education					
Fundamental incomp / comp.		12(80.0%)	3(20.0%)	1(6.7%)	14(93.3%)
High school incomp/ comp.		14(87.5%)	2(12.5%)	6(37.5%)	10(62.5%)
Superior incomp./comp.		3(100.0%)	0(0.0%)	3(100.0%)	0(0.0%)
	p-value	0.789[1]		0.003[1]	
Religion					
Catoholic		16(88.9%)	2(11.1%)	3(16.7%)	15(83.3%)
Evangelical		11(78.6%)	3(21.4%)	5(35.7%)	9(64.3%)
Other		2(100.0%)	0(0.0%)	2(100.0%)	0(0.0%)
	p-value	0.733[1]		0.048[1]	
Ocupation					
Formal		7(100.0%)	0(0.0%)	4(57.1%)	3(42.9%)
Informal		7(100.0%)	0(0.0%)	3(42.9%)	4(57.1%)
Retired		10(76.9%)	3(23.1%)	2(15.4%)	11(84.6%)
Unemployed		5(71.4%)	2(28.6%)	1(14.3%)	6(85.7%)
	p-value	0.361[1]		0.193[1]	
Family income					
Up to 1 SM		11(73.3%)	4(26.7%)	4(26.7%)	11(73.3%)
1 to 2 SM		15(93.8%)	1(6.3%)	4(25.0%)	12(75.0%)
3 or more SM		3(100.0%)	0(0.0%)	2(66.7%)	1(33.3%)
	p-value	0.268[1]		0.338[1]	
Origin					
Recife and RM		23(85.2%)	4(14.8%)	7(25.9%)	20(74.1%)
Other Regions in PE		6(85.7%)	1(14.3%)	3(42.9%)	4(57.1%)
	p-value	1.000[1]		0.394[1]	

[1] p-value of Fisher's exact test; B-TOFHLA: Brief Test of Functional Health Literacy in Adults; SM: Minimum wage; RM: Metropolitan region; PE: Pernambuco; incomp: incomplete; comp: complete

DISCUSSION

The findings of the socio-demographic variables of the present study were equivalent to other studies carried out in the population with CKD concerning age, sex, and family income[13,17,18]. CKD affects men and women without distinctions, however, it is possible to affirm that there is an increase in affections in males, but they seek health services less when compared to wome[19]. Such evidence may justify greater female demand in this clinic. As for the age group, worldwide, it is estimated that the elderly population will grow from 841 million in 2013 to 2 billion in 2050, concomitantly increasing the prevalence of NCDs[17]. It is known that the economic variable is highlighted as a risk predictor for the progression of CKD since the low family income negatively impacts the individual's living conditions by interfering with the quality of food, access to health services, and therapeutic adherence[13].

The results of the clinical profile of the current research were similar to those found in studies at the national level, concerning the underlying disease and time of treatment[19,20-22] and divergent from the findings regarding the stage of CKD. Therefore, it is assumed that there is a failure in the management of the disease and/or late access to the specialized service of Nephrology since the participants in this study are mostly in the terminal stage of CKD.

Thus, it is necessary to implement the guideline recommended by the Ministry of Health, which guarantees access to health services, early detection, and delayed disease progression, offering better survival and quality of life to the renal patient[23]. It is worth noting the relevance of carrying out other studies in this group to investigate the factors that influence the progression of CKD and the possible difficulties faced in having access to the health system.

In the aspects inherent to the level of knowledge about the basic principles of conservative treatment, it was observed, in the literature, predominantly insufficient knowledge of individuals[13,15], diverging from the findings of the present study. It is inferred that the chronicity of the disease makes the participant able to acquire knowledge that encompasses the aspects of illness and treatment. However, it is known that, even with sufficient knowledge, it may not be effective for carrying out nephroprotective measures. This leads us to affirm that just transferring knowledge to users is not enough for decisions that involve self-management of health. It is necessary to encourage investment in a health education process that seeks to incite critical-reflective questions in the subject about his health condition[15].

The high level of inadequate literacy found in this study is in line with the research in patients affected with chronic conditions[13,24,25]. An integrative review on the FHL reveals that inadequate levels predispose to the emergence of chronic diseases[26]. When viewing the integrated FHL model, one of the competencies involved is precisely the individual's ability to promote health and prevent diseases. Once that skill fails, health care is shaken. Thus, the formulation of strategies for interventions that favor the development of skills with an emphasis on prevention and health promotion is categorical[27].

Adequate FHL proved to be statistically associated with a higher level of education, data found in several studies involving the theme[11,13,26]. Therefore, education has a direct impact on the understanding of information in the context of health. It is appropriate to state that investments in the educational scenario imply positive outcomes in the health context. However, it is stated that, although there is an association with the inadequate FHL of individuals with low education, people with high education and adequate FHL may have limitations with specific health terminologies[28]. For this reason, it is still possible to investigate which domains of the B-TOHFLA questionnaire people with FHL and adequate schooling have difficulties in understanding.

The result related to the participants FHL in the present study shows a worrying reality due to the high percentage of the group with inadequate/borderline FHL. It shows that there is an accentuated risk of damage to health in this public, such as incorrect use of medications, errors in the times when medications should be taken and failures in adherence to diet therapy, which generate failure in the therapeutic regime[28] and, consequently, increase the speed of the CKD progression and anticipate entry into the RRT. It is necessary an emergency to identify the gaps that make these individuals vulnerable to the precarious health conditions to carry out assertive interventions in this conjuncture.

Another association pointed out by the study was the relationship, even if limitrofe, of the adequate FHL with the Spiritism and Seventh-day Adventist religion. It is known that Adventist doctrine has been studied over the years, drawing attention to their lifestyle habits[29]. One study noted that the Adventist lifestyle was able to ensure greater longevity and less risk for cardiovascular disease when compared to the non-Adventist population[30]. Self-management of health and effective decision-making in this group are hypothesized, as Adventism advocates body care, claiming to be a temple of the Holy Spirit[31]. In spiritist practice, there is a belief that the reason for illnesses is related to the individual himself, and it is necessary to self-examine to achieve self-perception, to be free from suffering[32]. Therefore, the zeal with the body comes from the affirmation that it is an instrument for the evolution of the spirit[32].

Nevertheless, although the study reveals statistical significance only for these two religions, it is emphasized that religious practice has shown, in general, to be a protective factor for health, since it encourages the abandonment

of harmful habits. Thus, the importance of encouraging researchers to study religiosity and its impact on issues involving health and FHL is reinforced[33].

Knowing the FHL levels allows individualized and collective actions to be carried out that are more directed to personal and group characteristics, to prevent grievances, treat diseases, or promote health. This scenario may be liable to change when there is a reformulation in the pedagogical practices of professionals inserted in the health system. These interventions should be promoted according to the population's literacy level, thus adapting professional-patient communication.

Concerning the limitations of the study, the difficulty, due to the dynamic flow of the ambulatory care, to address the target audience of this study is highlighted, as the interviews took place while the participants waited for medical consultations. So there was often a refusal for fear of losing the consultation that they waited. Besides, as it is a teaching hospital, other researches were going on concurrently, leaving the public resistant to participate in various researches.

The approach of studies about the knowledge and patients FHL under conservative treatment is still quite restricted. Larger studies should be carried out to investigate the association between the level of functional literacy in the health of chronic renal patients undergoing treatment and their knowledge, correlating it with the sociodemographic profile of the participants.

CONCLUSION

Participants with chronic kidney disease in conservative treatment evaluated obtained an inadequate level of functional health literacy and sufficient knowledge concerning the disease and treatment, however, these findings indicate that just the transfer of knowledge to users is not enough for decisions involving the self-management of health.

CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest, including specific financial interests, relationships and affiliations relevant to the topic.

ACKNOWLEDGEMENTS

The authors would like to thank the research participants and the team at the Nephrology outpatient clinic at HC-UFPE.

CONTRIBUTIONS

Jullyane Rebeca Rodrigues da Silva, **Sibelly Morgana Barata da Silva** and **Givaneide Oliveira de Andrade Luz** contributed to the elaboration and design of the study; with the acquisition, analysis and interpretation of data; and the writing and / or revision of the manuscript. **Lilian Katiússia Araújo de Medeiros**, **Jair Luiz Santos Júnior** and **Isabel Cristina Ramos Vieira Santos** contributed to the acquisition, analysis and interpretation of data; and the writing and / or revision of the manuscript.

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How to cite: Silva JRR, Luz GOA, Silva SMB, Medeiros LKA, Santos JL Júnior, Santos ICRV. Functional health literacy and knowledge of chronic renal patients in conservative treatment. Rev Bras Promoç Saúde. 2019;32:9470.