

Adherence of chronic renal insufficiency patients to hemodialysis*

Adesão de portadores de insuficiência renal crônica ao tratamento de hemodiálise

Adhesión de portadores de insuficiencia renal crónica al tratamiento de hemodiálisis

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ABSTRACT

Objective: To evaluate the adherence of patients, with chronic renal failure (CRF), to hemodialysis treatment. **Method:** This is a descriptive-quantitative study, conducted in a hemodialysis unit in Fortaleza-CE, the sample population was composed of 45 clients undergoing hemodialysis, who were interviewed. **Results:** The reactions of CRF patients confronted with the diagnosis were: 58% negative, 33% indifferent and 9% positive. The reactions related to hemodialysis were: 73.4% negative, 13.3% indifferent and 13.3% positive. The main difficulties in adhering were: transportation, length of the session, pain caused by the puncture made with the fistula, financial factors, dependence of companions, and knowledge deficit. The strategies to adhering were: fear of death, faith in God, hope for transplant, and family support. **Conclusion:** It was found that the CRF patients adhere to treatment to survive, but many do not complied. **Keywords:** Chronic renal failure; Hospital of hemodialysis units; Disorders of adaptation

RESUMO

Objetivo: Avaliar a adesão do cliente com insuficiência renal crônica (IRC) ao tratamento de hemodiálise. **Método:** Estudo descritivo, quantitativo, realizado em uma unidade de hemodiálise, Fortaleza-CE, alvo foi composta de 45 clientes em hemodiálise, que participaram de uma entrevista. **Resultados:** Constatou-se como reações dos clientes diante do diagnóstico de IRC: 58% negativas, 33% indiferentes e 9% positivas. Reações diante da hemodiálise: 73,4% negativas, 13,3% indiferentes e 13,3% positivas. Principais dificuldades de adesão: transporte; tempo das sessões; dor da punção da fístula; fatores financeiros; dependência de acompanhantes e déficit de conhecimento. Estratégias de adesão: medo da morte; fé em Deus; esperança de transplante e suporte familiar. **Conclusão:** Constatou-se que o cliente portador de IRC adere ao tratamento para sobreviver, mas muitos não se adaptam.

Descritores: Insuficiência renal crônica; Unidades hospitalares de hemodiálise; Transtornos de adaptação

RESUMEN

Objetivo: Evaluar la adhesión del cliente, con insuficiencia renal crónica (IRC), al tratamiento de hemodiálisis. **Método:** Se trata de un estudio descriptivo cuantitativo, realizado en una unidad de hemodiálisis, en Fortaleza-CE; la población objeto fue compuesta de 45 clientes que realizaban hemodiálisis, los que fueron entrevistados. **Resultados:** Delante del diagnóstico se constató como reacciones de los clientes de IRC: 58% negativas, 33% indiferentes y 9% positivas. Las reacciones delante de la hemodiálisis fueron: 73,4% negativas, 13,3% indiferentes y 13,3% positivas. Las principales dificultades en la adhesión fueron: transporte; tiempo de las sesiones; dolor de la punción de la fístula; factores financieros; dependencia de acompañantes; y, déficit de conocimiento. Las estrategias de adhesión fueron: miedo a la muerte; fe en Dios; esperanza de trasplante; y, soporte familiar. **Conclusión:** Se constató que el cliente portador de IRC adhiere al tratamiento para sobrevivir, sin embargo muchos no se adaptan.

Descritores: Insuficiencia renal crónica; Unidades hospitalarias de hemodiálisis; Trastornos de adaptación

* Study carried out in a hemodialysis unit from a large public hospital in the city of Fortaleza-CE.

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INTRODUCTION

Among renal diseases, chronic renal insufficiency stand out because it is a disease that leads to stressful situations to patients and it also creates new stressing factors, including: treatment, changes in the lifestyle, decrease in physical energy, change in looks and new responsibilities. These factors require patients to establish coping strategies to adhere to the new life conditions.

Today, chronic renal insufficiency (CRI) emerges as a serious public health problem worldwide, and it is considered a growing epidemic. In Brazil, according to the 2008 census of the Brazilian Society of Nephrology (SBN), there are 684 active Enrolled Renal Units at SBN, among them, 310 declared they offered an Outpatient Dialysis Program for Chronic Patients, serving 41,614 patients. Only in the Northeast, there are 7,948 people undergoing dialysis⁽¹⁾.

When CRI is diagnosed, a conservative or dialysis treatment should be started as early as possible, otherwise, the complications can lead to death⁽²⁾.

Between these treatments, hemodialysis is the most commonly used (89.4%)⁽¹⁾, it must be performed by clients with CRI throughout their lives or until they undergo successful renal transplant. Therefore, CRI demands patients' adjustment or, at least, their adherence to hemodialysis and many people cannot adjust to the new lifestyle, however, they adhere to it because it is essential to maintain their lives

Studies showed that individuals undergoing hemodialysis face losses and stressful changes in their looks and organic functions. As a consequence of these losses, many people undergoing hemodialysis become depressed and anxious. Nonetheless, most people can adjust to hemodialysis or, at least, adhere to treatment⁽³⁾.

Generally, psychological and social problems from CRI and from the treatment decrease when hemodialysis programs encourage individuals to be independent and to recover their previous interests. For that reason, Nursing care of hemodialysis patients requires great sensibility and professionals' sympathy to recognize the main problems faced by patients to adhere to treatment.

These facts led to several concerns, and the following stand out among them: what are the reactions presented by customers when they receive the diagnoses of chronic renal insufficiency and the need to carry out hemodialysis? What are patients' main difficulties to adhere and adjust to hemodialysis treatment? What strategies patients use to adhere to hemodialysis treatment?

It is believed that by answering these questions nurses will know the main problems in the lives of patients undergoing hemodialysis, as well as the coping strategies used by patients to adjust or, at least, to adhere to the new lifestyle.

Therefore, to improve patients' quality of life, the strategies for adherence to hemodialysis treatment should be known because this information may be the basis to establish nursing intervention, according to patients' real needs, aiming at promoting greater acceptance during treatment.

The overall goal was to assess adherence of patients with CRI to hemodialysis treatment. The specific goals were: to check patients' reactions to the diagnosis of chronic renal insufficiency and the need to undergo hemodialysis; to identify the main difficulties for patients to adhere to hemodialysis treatment; and to verify the patients' strategies to adhere to hemodialysis.

METHODS

Descriptive study with a quantitative approach carried out in a hemodialysis unit from a large public hospital in the city of Fortaleza-CE.

The target population was formed by 47 patients with CRI undergoing hemodialysis treatment enrolled at the clinic. However, only 45 patients took part in the study since two were excluded, one because he was 17 years old, and the other refused to take part.

Data collection was carried out in August and September 2007, after the project was approved by the Research Ethics Committee of the institution. An interview script was used with open and closed questions to reach the goals proposed. Each patient could mention more than one feeling or emotional reaction in their answers.

Data were organized in spreadsheets and pictures at Microsoft Excel for Windows XP Professional.

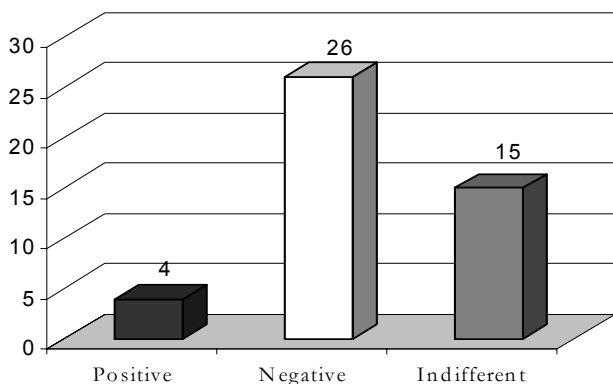
The ethical and legal aspects were followed according to Resolution # 196/06. All participants were explained the objectives of the study and gave their written consent. The project was approved by the Research Ethics Committee at Universidade de Fortaleza under Protocol # 050701/07.

RESULTS

Predominant sociodemographic characteristics in clients with CRI were: 65% were males; 78% were less than 60 years of age, ranging from 18 to 74 years old; 64% had poor education, 11% were illiterate; 44% had some kind of paid work; 71% had family income of up to two minimum wages, ranging from 0.5 to 13 minimum wages; 51% were married or in a stable relationship; 62% were from Fortaleza; 94% said they believed in God, 67% were Catholics, 29% Evangelicals; and 55% were undergoing hemodialysis from 1 to 5 years.

As for patients' reactions to the diagnosis of CRI, their reactions to the medical diagnoses of CRI varied; there were positive, negative, and even indifferent

reactions.

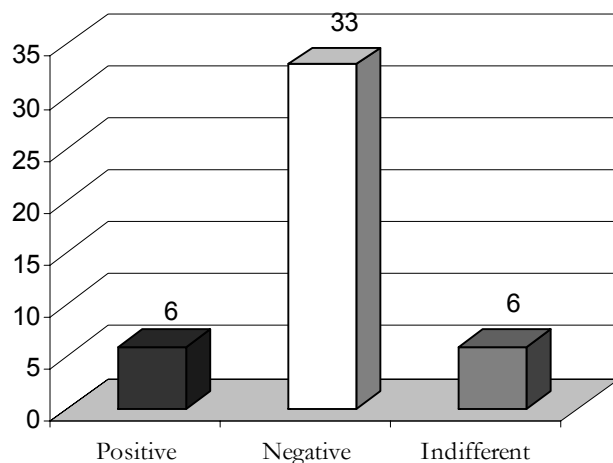


Picture 1 – Characterization of patients according to their reactions to the diagnoses of chronic renal insufficiency. Fortaleza-CE, Aug-Sept/2007.

According to Picture 1, negative reactions to the medical diagnoses of CRI were predominant (58%), standing out: concern (6), cry (4), surprise (4), fear (3), sadness (3), denial (3), anger (2), indignation (2), nervousness (2), despair (2), suffering (1) and suicide attempt (1).

The following positive reactions were mentioned: happiness (1) to know that there is treatment and to relieve symptoms and feeling calm (3) because they have faith in God.

People that reacted with indifference to the diagnoses said that was because they lacked knowledge on hemodialysis treatment. It is important to consider that 64% of the clients interviewed presented poor level of education.



Picture 2 – Patients' characterization regarding the need for hemodialysis. Fortaleza-CE, Aug-Sept/2007.

In Picture 2, participants' reactions to the need for hemodialysis are exposed, most (73.4%) presented a negative reaction, the following standing out: sadness

(9), despair (7), fear (6), anger (5), denial (4), suicidal ideation (4), cry (3), surprise (2), anguish (2), depression (1), self-pity(1), social isolation (1), faint (1), nervousness (1), concern (1) and deception (1). There was a percentage increase in negative reactions from 53% to 73.4%, between the detection of CRI and the start of hemodialysis.

However, 13.3% mentioned they had hopes for a prolonged life and greater quality of life after renal transplant. This factor, together with faith in God, influenced the positivity of the reactions to the need to perform hemodialysis.

Chart 1 – Difficulties to adhere to hemodialysis, according to reports of 45 participants. Fortaleza-CE, Aug-Sept/2007.

Difficulties for hemodialysis adherence*	n
Transport	12
Frequency and time used in treatment sessions	12
Pain or discomfort during arteriovenous fistula puncture	11
Distance	10
Financial factors	5
Care with the arteriovenous fistula	5
Leisure limitation	3
Getting up early	3
Water restriction	2
Not being able to work	2
Depending on people to take them	1
Knowledge deficit	1
Did not mention difficulties	10

* more than one difficulty per patient

Chart 2 – Factors promoting patients' adherence to hemodialysis. Fortaleza-CE, Aug-Sept/2007.

Factors fostering adherence to hemodialysis treatment	N
Fear of death	16
Faith in God and hope for a transplant	6
Resignation	6
Family	4
Hemodialysis professionals	1
Work	1
Indifference	1

Data from Chart 1 identified several responses related to the difficulties faced by CRI patients to adhere to hemodialysis treatment, mentioning the transport and time spent to go to the clinic as well as other factors such as: pain or discomfort in arteriovenous fistula puncture and distance. Not meeting basic human needs such as comfort (absence of pain), sleep, rest, water intake and leisure was also mentioned as a hindrance to adhere to treatment. It is important to highlight that each customer presented one or more difficulties. Ten patients (22%), referred absence of difficulties to perform hemodialysis.

Among factors that foster hemodialysis treatment,

the fear of dying stood out, because patients know that hemodialysis is essential to maintain their lives.

DISCUSSION

As for sociodemographic characteristics of the patients interviewed, the findings are in agreement with those from the literature, as demonstrated in the next paragraphs.

Male predominance (65%) in the population studied was similar to the results found by other studies with CRI patients undergoing hemodialysis treatment⁽⁴⁻⁶⁾.

Regarding age, most were below 60 years of age (78%), which is in accordance with the 2008 Census of the Brazilian Nephrology Society, which shows that most (63.7%) people undergoing dialysis are below 60 years old⁽¹⁾.

Level of education was similar to that found in other studies⁽⁴⁻⁵⁾ which found 65.6% and 66% of people who had finished high school and 6.47%, 6.7% of illiterates, respectively.

As for family income, 91% received less than five minimum wages, a percentage that is higher than that of another study⁽⁵⁾ in which 68.5% of the people received up to five minimum wages. These data showed that study participants have a low socioeconomic status.

Living with family or having someone to take you may contribute to improve social support related to CRI complications, hemodialysis treatment and comorbidities⁽⁷⁾.

Faith in God, presented by 94% of patients, and religion work as cognitive mediators that interpret adverse events in a positive manner, favoring people's adjustment to their health conditions.

As for time undergoing hemodialysis, 55% were in the range from one to five years, in accordance with other studies where the average was 30 months (2.5 years)⁽⁵⁾ and the predominant time range was one to three years (31.8%)⁽⁶⁾. Time undergoing treatment is important in the worsening of comorbidities, and it was pointed out by several studies as a determining factor for survival of patients undergoing hemodialysis⁽⁸⁾.

Reactions to the diagnoses showed that some people denied their condition and were afraid; however, other patients had a negative reaction due to lack of knowledge about the disease. These are expected reactions since the intense emotional stress experienced by people with CRI because of the changes in their lives make people react with feelings of fear and rejection⁽⁹⁾.

As for the positive reactions presented, they are justified by the ability to deal realistically with problems and with faith, allowing for positive reactions to the diagnoses of CRI. Religious variables are associated with lower depression and anxiety indexes⁽¹⁰⁾.

Quality of life of people undergoing hemodialysis has a positive correlation with emotional aspects and education, suggesting that people with more years of education have intellectual resources that can make them adjust better to the consequences of CRI and hemodialysis⁽¹¹⁾.

Lack of information and knowledge about hemodialysis are stressing factors mentioned by patients starting hemodialysis⁽¹²⁾.

In a hemodialysis unit, nurses are in charge of passing on knowledge on the disease to patients and their family members, teaching them how to live better with this chronic disease. Patients must completely understand, from the start of the hemodialysis program that if the treatment is neglected, the consequences are severe. Nurses have to give patients the guidelines so that they can decide properly on their responsibilities.

The behavioral changes patients have to undergo reflect directly on the impairment in the quality of life. The way these people react to changes, and the coping mechanisms are related with the support received by their loved ones, as well as by their beliefs and values⁽¹³⁾.

Renal transplant for people undergoing hemodialysis make them cope in a more positive manner⁽¹⁴⁾.

Adherence to hemodialysis is very tiresome because it is performed three times a week, for four hours /day, with the need for transport; we know that the current conditions of the Brazilian roads are poor and this is a stressor for chronic renal patients, hindering hemodialysis treatment⁽¹⁴⁾.

Many times patients have to travel through unpaved roads to get to the city where the Nephrology Unit is, facing a fatiguing trip⁽¹⁵⁾.

Some authors have seen that the functional capacity of people undergoing dialysis is impaired, hindering labor activities especially among those 18 to 59 years old, who are economically active⁽¹⁶⁾. Hemodialysis patients cannot work because of the physical involvement, the time used for hemodialysis, and difficulties to be hired after treatment initiation⁽¹⁴⁾.

Care with arteriovenous fistula (AVF) must be accurate and constant to avoid complications (stenosis, thrombosis, failure of maturation, hand edema, pseudoaneurysm and infection), that may hinder the quality of the treatment, increasing discomforts between dialysis sessions⁽¹³⁾.

The human need for comfort is compromised at each hemodialysis session, when customers undergo an AVF puncture with a thick needle which is a very painful procedure necessary to perform the treatment. Patients reported being anxious about the sad expectation of undergoing a new puncture and pain was a discouraging factor for treatment performance.

Nurses must create situations to foster comfort, to

help patients cooperate with treatment, and to give them the necessary knowledge on CRI and on hemodialysis treatment to face the situation and to decrease stress. Adherence difficulties reported by participants of the research are similar to those found in the study⁽¹⁴⁾ on the coping strategies of chronic renal patients undergoing dialysis where they reported difficulties to travel, water and food restrictions among the conditions that lead to stress in some patients with CRI, becoming factors that hinder hemodialysis.

Other studies^(5-6, 11) on the quality of life of people with CRI undergoing dialysis demonstrated that it was clearly impaired with vitality, the physical and the emotional aspects were the most affected side in these people.

Being dependent on care can be frustrating for patients with CRI because elderly undergoing dialysis can become more dependent on their kids and not being able to live alone. Many times, their responsibilities and their roles have to change to favor adherence to hemodialysis which can lead to stress and feelings of guilty and incapacity in patients.

Among the factors that foster adherence to hemodialysis treatment, faith in God was mentioned and seen in the statements of 13% of the interviewees. For them, God is the only one capable of relieving suffering and healing the diseases. During the disease and in death, religious practices provide support because people that feel God in their lives can adjust to unexpected changes. They have hopes even when their support system fails⁽¹⁷⁾.

The disease intensifies the search for God which can be considered a natural phenomenon, due to the need of protection, reward, and self-preservation.

Regarding resignation mentioned by patients, we know that despite their conditions and the difficult time they are going through, they are able to overcome it.

There are people who can deal with more painful situations, with differences in the way they react and adjust to the disease. Although they face despair and fear the diagnoses and treatment, they feel happy after they adjust to the changes brought by the disease⁽¹⁷⁾.

Professional participation in patients' adherence showed that nurses should use educational strategies with patients so that they continue with hemodialysis, encouraging them to have an active life with their friends and relatives within their limitations.

Family participation is essential, since they take up roles of protecting and socializing their members. Family as a unit develops a system of values, beliefs and attitudes towards the health and the disease that are expressed and demonstrated through health-disease behaviors of their members.

Coping mechanisms focused on emotions have positive association with work because people that work have less depression, and women are less anxious⁽¹⁸⁾.

CONCLUSIONS

Based on the development of the present study, we saw that patients have difficulty to adhere to hemodialysis treatment but their search for ways to cope with it may be essential to life.

Most patients with CRI have not adjusted to hemodialysis, although the treatment requires many privations, these clients have adhered to it because hemodialysis can give these patients greater survival. Identifying the main difficulties of patients to adhere to hemodialysis as well as the strategies used by them can bring contributions to the health team, increasing their knowledge on the behavior of these people, making care planning easier so that patients can adapt to dialysis treatment.

REFERENCES

1. Sociedade Brasileira de Nefrologia. Censo de Diálise SBN 2008. Disponível em: http://www.sbn.org.br/censos/censos_antigos/censo_2008.pdf.
2. Barbosa DA, Gunji CK, Bittencourt ARC, Belasco AGS, Diccini S, Vattimo F, Vianna LAC. Co-morbidade e mortalidade de pacientes em início de diálise. *Acta Paul Enferm.* 2006; 19(3):304-9.
3. Fernandes MGM, et al. Diagnósticos de Enfermagem de uma família com um membro portador de IRC. *Enferm Rev.* 1998;4(7-8): 18-24.
4. Dias TS. A técnica de punção da fístula artério-venosa como fator preponderante à adequação hemodialítica [dissertação]. Ribeirão Preto: Escola de Enfermagem de Ribeirão Preto da Universidade de São Paulo; 2006.
5. Kusumota L. Avaliação da qualidade de vida relacionada à saúde de pacientes em hemodiálise [tese]. Ribeirão Preto: Escola de Enfermagem de Ribeirão Preto da Universidade de São Paulo; 20065.
6. Martins MRI, Cesarino CB. Qualidade de vida de pessoas com doença renal crônica em tratamento hemodialítico. *Rev Latinoam Enferm.* 2005 13(5):670-6.
7. Christensen AJ, Wiebe JS, Smith TW, Turner CW. Predictors of survival among hemodialysis patients: effect of perceived family support. *Health Psychol.* 1994;13(6):521-5.
8. Morsch C, Gonçalves LF, Barros E. Índice de gravidade da doença renal, indicadores assistenciais e mortalidade em pacientes em hemodiálise. *Rev Assoc Med Bras (1992).* 2005;51(5):296-300.
9. Almeida AM, Meleiro AMAS. Depressão e insuficiência renal crônica: uma revisão. *J Bras Nefrol.* 2000;22(1):192-200.
10. Siegel K, Anderman SJ, Schrimshaw EW. Religion and coping with health-related stress. *Psychol Health.* 2001;16(6):631-53.
11. Castro N, Caiuby AVS, Draibe AS, Canziani MEF.

- Qualidade de vida de pacientes com insuficiência renal crônica em hemodiálise avaliada através do instrumento genérico SF-36. *Rev Assoc Med Bras* (1992). 2003;49(3):245-9.
12. Harwood L, Locking-Cusolito H, Spittal J, Wilson B, White S. Preparing for hemodialysis: patient stressors and responses. *Nephrol Nurs J*. 2005;32(3):295-302; quiz 303.
 13. Lima AFC, Gualda DMR. Reflexão sobre a qualidade de vida do cliente renal crônico submetido à hemodiálise. *Nursing* (São Paulo). 2000;3(30):20-3.
 14. Bertolin DC. Modos de enfrentamento de pessoas com insuficiência renal crônica terminal em tratamento hemodialítico [dissertação]. Ribeirão Preto: Escola de Enfermagem de Ribeirão Preto da Universidade de São Paulo; 2007.
 - 151 Machado LRC. Por intermédio da vida cotidiana de doentes com insuficiência renal crônica em hemodiálise: entre o inevitável e o casual [dissertação]. São Paulo: Escola de Enfermagem da Universidade de São Paulo; 2001.
 16. Lara EA, Sarquis LMM. O paciente renal crônico e sua relação com o trabalho. *Cogitare Enferm*. 2004;9(2):99-106.
 17. Potter PA, Perry AG. Grande tratado de enfermagem prática: clínica e prática hospitalar. 3a. ed. São Paulo: Santos; 2005.
 18. Takaki J, Yano E. The relationship between coping with stress and employment in patients receiving maintenance hemodialysis. *J Occup Health*. 2006;48(4):276-83.