

An association between forms of coping and the socio-demographic variables of people on chronic hemodialysis

ASSOCIAÇÃO ENTRE OS MODOS DE ENFRENTAMENTO E AS VARIÁVEIS SOCIODEMOGRÁFICAS DE PESSOAS EM HEMODIÁLISE CRÔNICA

ASOCIACIÓN ENTRE LOS MODOS DE ENFRENTAMIENTO Y LAS VARIABLES SOCIODEMOGRÁFICAS DE PACIENTES EN HEMODIÁLISIS CRÓNICA

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ABSTRACT

This sectional study was performed with the objective to verify the association between the forms of coping used by people on chronic hemodialysis and their socio-demographic variables. A semi-structured instrument and the Folkman and Lazarus' Coping Strategies Inventory were used. The sample consisted of 107 adults, mostly male (62.4%), on ambulatory hemodialysis for over six months. The most commonly referred forms of coping were related to the positive reevaluation factor (coping centered on emotions); with the highest mean scores among women for all factors and for people who reported having a partner, living with their families and receiving support in their treatment, and the highest scores were common for the factors control, self-control, and social support. Knowing the forms of coping prepares nurses to reinforce or seek, with patients on hemodialysis, choosing positive forms of coping and propose actions that permit patients to develop adaptive mechanisms.

DESCRIPTORS

Renal dialysis
Renal insufficiency, chronic
Adaptation, psychological
Nursing care

RESUMO

Este é um estudo seccional que objetiva verificar a associação entre os modos de enfrentamento das pessoas em hemodiálise crônica e as variáveis sociodemográficas. Foram utilizados um instrumento semiestruturado e o Inventário de Estratégias de Enfrentamento de Folkman e Lazarus. A amostra constituiu-se por 107 adultos, predominantemente do sexo masculino (62,4%), em hemodiálise ambulatorial há mais de seis meses. Os modos de enfrentamento mais referidos foram relacionados ao fator reavaliação positiva (enfrentamento focado na emoção); sendo que os escores médios mais elevados foram para as mulheres em todos os fatores e para as pessoas que expuseram ter companheiro, morar com familiares e ter apoio no tratamento, e foram comuns os maiores escores para os fatores confronto, autocontrole e suporte social. O conhecimento dos modos de enfrentamento prepara o enfermeiro para reforçar ou buscar, junto às pessoas em hemodiálise, a escolha de modos de enfrentamento positivos e propor ações que permitam o desenvolvimento dos mecanismos adaptativos do paciente.

DESCRITORES

Diálise renal
Insuficiência renal crônica
Adaptação psicológica
Cuidados de enfermagem

RESUMEN

Estudio seccional que objetiva verificar la asociación entre modos de enfrentamiento de pacientes en hemodiálisis crónica y variables sociodemográficas. Fueron utilizados un instrumento semiestructurado e Inventario de Estrategias de Enfrentamiento de Folkman y Lazarus. La muestra se constituyó de 107 adultos, en hemodiálisis ambulatoria con más de seis meses, predominantemente de sexo masculino (62,4%). Los modos de enfrentamiento más referidos referenciaron al factor reevaluación positiva (enfrentamiento focalizado en emociones), resultando que los puntajes medios más elevados fueron para mujeres en todos los factores, y para personas que manifestaron tener compañero, residir con familiares y tener apoyo en el tratamiento. Fueron comunes mayores puntajes para los factores Confrontación, Autocontrol y Soporte Social. El conocimiento de modos de enfrentamiento prepara al enfermero para reforzar o buscar, junto al paciente en hemodiálisis, la elección de modos de enfrentamiento positivos y a proponer acciones que permitan el desarrollo de los mecanismos adaptativos de la persona.

DESCRIPTORES

Diálisis renal
Insuficiencia renal crónica
Adaptación psicológica
Atención de enfermería

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INTRODUCTION

In the theoretical concept of stress, coping is defined as cognitive and behavioral efforts to control, reduce or tolerate internal or external demands that are evaluated as exceeding the resources of the person, regardless of the result of these efforts⁽¹⁾. Coping is also considered a process guided by an individual cognitive evaluation of the stressors, and these, by definition, depend on the relationship between the person and the environment. This process of cognitive evaluation has two forms: primary evaluation, when a person evaluates the significance of the specific event for their well-being; and secondary evaluation, when the person evaluates which coping methods the situation demands and which physical, social, psychological and material options they have. The evaluation of the control of the situation is also part of the secondary evaluation⁽²⁾. The coping process has two important functions: to regulate the emotional response to stressors, known as emotion-focused coping, and to control or alter the stressor, which is called problem-focused coping⁽¹⁾. When dealing with a stressor, most people use both emotion-focused and problem-focused coping, and can seek problem-focused coping methods to alleviate feelings such as anger and anxiety⁽¹⁾. A stressor can be anything that causes a breakdown of internal homeostasis and that requires some adaptation, even if it is of a benign or even very positive nature⁽³⁾.

In this study, chronic renal failure (CRF) stands out among the chronic non-communicable diseases (CNCDs), due to the marked changes provoked by the treatment, which may be considered sources of stress and responsible for the need for adaptation of the patients and the family members.

Among the stressors mentioned in some studies by people with CRF are: food and fluid intake restrictions; pruritus; muscle cramps; fatigue; uncertainty about the future; sleep disturbance; inability to have children; changes in family structure; the time spent doing the treatment; financial problems; changes in work activities; difficulties with transport to the Hemodialysis Unit; physical activity limitations; decline in bodily functions; and changes in the social life⁽⁴⁻⁵⁾.

In 2007, it was estimated that 73,605 people were on dialysis, and of these, 66,833 people (90.8%) were undergoing hemodialysis treatment⁽⁶⁾. Chronic renal failure is a worldwide public health problem, and as a CNCD is characterized by the absence of micro-organisms in its epidemiological profile, by the long clinical course and by its irreversibility. The CNCDs represent 60% of the causes of deaths worldwide⁽⁷⁾. Some authors emphasize the need for health professionals to comprehend the patients in hemodialysis programs so that they do not become agents

that trigger new conflicts and tensions, since this treatment is considered inevitable, unavoidable and has direct consequences in the life of the person⁽⁸⁾. Few studies have been developed that focus on the coping methods of people on hemodialysis. Therefore investments in this area of knowledge are justified for their contribution to improving the quality of life and survival of these people⁽⁹⁻¹⁰⁾. Knowledge of the coping methods of people on hemodialysis is useful for the multidisciplinary team to direct the control of the stressors inherent to the disease and to the hemodialysis, favoring the adaptation process of these people to the therapeutic regime.

OBJECTIVE

The aim of this study is verify the association between the coping methods of people with CRF on hemodialysis and the sociodemographic variables.

METHOD

Knowledge of the coping methods of people on hemodialysis is useful for the multidisciplinary team to direct the control of the stressors inherent to the disease and to the hemodialysis, favoring the adaptation process of these people to the therapeutic regime.

This is a descriptive, cross-sectional, quantitative study developed at the Institute of Urology and Nephrology of São José do Rio Preto. The criterion for inclusion in the study were: to not present any impediment to respond to the semi-structured interview script and to the proposed inventory, and to have been in hemodialytic treatment for six months or more, considering that the adaptation to the treatment phase occurs during this period and in order to minimize the interference of the neurological symptoms of the uremia⁽¹¹⁾. Of the 192 people, with CRF in outpatient hemodialysis, a total of 85 people were excluded, 34 due to refusal to participate in the study; 12 due to neurolog-

ical deficits resulting from diseases such as sclerosis, cerebral vascular accident, Down syndrome and schizophrenia, 19 for having been on hemodialysis for less than six months; seven for auditory deficiency; six due to death; two due to change of treatment; two for unit transfer, one due to renal function recovery; one due to abandonment of treatment; and one for being less than 18 years of age. The refusal of individuals to participate in the study may be explained by the lack of familiarity of the population with academic studies developed at the institution. The sociodemographic variables considered in this study were: age, gender, schooling, occupation, income, housing conditions and marital status.

To evaluate the coping methods related to the CRF and to the hemodialysis, the study population responded to the Coping Strategies Inventory of Folkman and Lazarus (CSI). In addition to this instrument, the interviewees responded to a semi-structured interview script containing demographic data in order to characterize the population.

The interviews were conducted by the researcher and lasted, on average, 45 minutes. The patients were interviewed in the Hemodialysis Unit, before the start of the hemodialysis session or up to one hour before its completion, in order to avoid compromising the responses due to fatigue of the patients, which would influence the results of this study. The CSI was translated and validated into Brazilian Portuguese, demonstrating the existence of correspondence between the original English version and the translated version, allowing its application in other studies. Cronbach's coefficient alpha (α) in the original study varied between 0.56 to 0.85 among the factors⁽¹²⁾. In the translation, cultural adaptation and validation into Portuguese, of the 66 items analyzed, 46 items composed the eight factors formed through the method of principal factors with oblique rotation, as in the original version:

- Confrontive coping: describes the efforts to alter the stressful situation,
- Distancing: describes the efforts of the person to distance oneself from the stressful situation,
- Self-controlling: describes the efforts of the person to control their own feelings;
- Seeking social support: describes the efforts of the person in seeking information and emotional support;
- Accepting responsibility: describes the knowledge about the contribution of the person to the problem and the attempt to do the right thing
- Escape-avoidance: describes desires, thoughts and behavioral efforts to escape or avoid the problem;
- Planful problem solving: describes efforts to alter the situation with analytic evaluation to solve the problem;
- Positive reappraisal: describes efforts to create a positive meaning, focusing on personal growth, this also has a religious aspect⁽²⁾.

These factors of the CSI were classified as: problem-focused coping (the factors Confrontive coping and Planful problem solving); emotion-focused coping (the factors Distancing, Self-controlling, Accepting responsibility, Positive reappraisal and Escape-avoidance); and emotion-focused and problem-focused coping (the factor Seeking social support)⁽¹⁾. The scale, as in the original English version, is a Likert type scale with a format that allows four types of responses, i.e. four scores: 0 = does not apply and/or not used, 1 = used somewhat, 2 = used quite a bit, 3 = used a great deal. Zero being the lowest score, scored by people who do not use the coping methods, and 4 the highest score, scored by people who use the coping methods a great deal. The scale does not present a total score for evaluation, and the items should be evaluated through the mean scores within each factor⁽²⁾.

For reflective purposes of the people interviewed, it was proposed that before completing the CSI they respond to the following: "Thinking about kidney disease (chronic renal failure) and hemodialysis. Mention three things or situations, related to the disease and to the hemodialysis, which make you more stressed. In other words, that cause change or the need for adaptation". For this issue analysis of the semantic meaning of the answers was not carried out. After approval from the Ethics Committee of the IBILCE-UNESP of São José do Rio Preto, protocol No. 39/06 of October 2006, a pilot study was performed, beginning the data collection, which had a duration of four months. The interviews were conducted by the researcher and had, on average, a duration of 45 minutes. The respondents were informed about the study and signed the Terms of Free Prior Informed Consent. For the statistical analysis, the program Statistical Package for the Social Sciences (SPSS, 1999) version 11.5 was used, in which descriptive analysis and the Student t and Mann-Whitney tests, for comparison between two independent samples, were performed. For the continuous variables, the Spearman's correlation test was employed. The comparison scores and correlation scores were considered statistically significant at $p < 0.006$, according to the Bonferroni criterion, in which $p = 0.05$ was divided by eight, according to the eight factors of the instrument used ($0.05/8 = 0.006$).

RESULTS

A total of 107 people participated in this study, including 67 (62.6%) males and 40 (37.4%) females. Their ages ranged between 18 and 85 years, with a mean age of 51.1 years and standard deviation (SD) of 14.3 years. Regarding schooling, 54 (50.5%) people had between 1 and 8 years of study, the mean years of study was 7.6 years (SD= 4.6 years). In relation to marital status, 68 (63.5%) people had a partner and 39 (36.5%) people did not. Of the interviewees, 95 (88.8%) lived with family members, and the other 12 (11.2%) lived alone. When asked whether anyone followed their treatment, 85 (79.4%) people responded positively and the other 22 (20.6%) negatively.

The monthly family income ranged between 1 and 38 minimum wages (MW), the mean was 5.5 MW (SD=5.9 MW), the predominant income range was between 1 and 3 MW for 41 (38.3%) people. Ten people did not provide the information regarding income, and the monthly MW at the time of the data collection was R\$ 350.00. Regarding work, 10 (9.3%) people reported having some profitable activity related to work and 97 (90.7%) people reported not working, of these 74 (76.3%) were retired.

For the evaluation of coping methods, using the program SPSS (1999) version 11.5, the mean scores of each factor, the standard deviation, the median, and the Cronbach's coefficient alpha (α) were obtained. The mean scores were calculated according to the number of items in each factor, as described in Table 1.

Table 1 - Mean scores of the CSI factors applied with people on hemodialysis - São José do Rio Preto, SP - 2007

Factors (numbers of items)	Mean score	Standard deviation	Median	α (Cronbach)
Confrontive coping (6)	0.60	0.46	0.50	0.50
Distancing (7)	0.86	0.50	0.86	0.56
Self-controlling (5)	1.20	0.54	1.20	0.46
Seeking social support (6)	1.23	0.61	1.16	0.70
Accepting responsibility (7)	0.94	0.54	0.86	0.60
Escape-avoidance (2)	1.35	0.90	1.50	0.62
Planful problem solving(4)	1.36	0.72	1.37	0.70
Positive reappraisal(9)	1.41	0.55	1.44	0.75

The internal consistency of the CSI factors, as measured by Cronbach's coefficient alpha, ranged between 0.46 (in the factor Self-controlling) and 0.75 (in the factor Positive reappraisal). In this study there was a higher referral to the coping methods related to the factor Positive reappraisal, with a mean score of 1.41, and a lower reference to the coping methods related to the factor Confrontive coping, with a mean score of 0.60. There was a predominance of the emotion-focused coping methods. The analysis of mean scores of the association between the coping methods and the sociodemographic variables is shown in Table 2.

Table 2 - Mean scores of the CSI factors applied with people on hemodialysis, according to the sociodemographic variables - São José do Rio Preto, SP - 2007

Sociodemographic Variables	Mean of the CSI Factors							
	Sociodemographic Variables	Confrontive coping	Distancing	Self-controlling	Seeking social support	Accepting responsibility	Planful problem solving	Positive reappraisal
Gender								
M	0.57	0.85	1.17	1.21	0.91	1.30	1.35	1.36
F	0.62	0.87	1.24	1.25	1.00	1.43	1.37	1.47
Age group								
18 -60	0.55	0.81	1.22	1.26	0.96	1.33	1.42	1.50*
≥ 60	0.67	0.97	1.16	1.15	0.90	1.39	1.22	1.20
Have partner								
Yes	0.63	0.90	1.14	1.29	0.94	1.30	1.33	1.34
No	0.52	0.77	1.30	1.12	0.95	1.42	1.41	1.52
Cohabitation								
Live alone	0.51	0.72	1.18	1.04	0.92	1.25	1.65	1.46
Live with family members	0.60	0.87	1.20	1.25	0.95	1.36	1.33	1.40
Support in the treatment								
Yes	0.33	0.78	1.11	1.20	0.77	1.00	1.15	1.32
No	0.66	0.76	1.22	1.23	0.98	1.43	1.41	1.43
Schooling								
< 9	0.60	0.95	1.20	1.19	1.00	1.28	1.30	1.36
9 -11	0.54	0.76	1.24	1.26	0.85	1.67	1.33	1.46
≥ 12	0.63	0.67	1.17	1.30	0.84	1.25	1.58	1.52
Work								
Yes	0.60	0.64	1.29	1.35	0.91	1.00	0.87**	1.45
No	0.59	0.88	1.20	1.21	0.94	1.38	0.30	1.40
Income(MW)								
1 -2	0.66	0.88	1.16	1.12	0.96	1.33	1.24	1.35
2 -3	0.53	1.06	1.18	1.32	1.05	1.33	1.50	1.52
>3	0.62	0.77	1.20	1.25	0.91	1.34	1.32	1.35

*p=0.009, ** p=0.017

Regarding gender, the mean scores presented by the women were higher than those of the men in all factors. The elderly (people aged 60 years or older) presented higher mean scores for the factors Confrontive coping, Distancing and Escape-avoidance, and their predominant coping methods were emotion-focused. The people who reported having a partner had higher mean scores for the factors Confrontive coping, Distancing and Seeking social support than the people who reported not having a partner. The people who reported living with family members presented higher mean scores for almost all factors, except for the factors Planful problem solving and Positive reappraisal, than the people who reported living alone. The people who reported having some support in the treatment, from the partner, children or another family member, obtained higher mean scores than those who did not have support, for almost all the factors except the

factor Distancing. For the people who responded positively to having a partner, living with family members and having support in the treatment, the predominant coping methods were emotion-focused and for the factors Confrontive coping, Self controlling and Seeking social support higher scores than those who responded negatively were common.

People with ≥12 years of schooling had higher mean scores for the factors Confrontive coping, Seeking social support, Planful problem solving and Positive reappraisal in relation to the people with less schooling, with a predominance of problem-focused coping methods. The people with monthly incomes of two to three MW presented higher mean scores for the factors, Distancing, Seeking social support, Accepting responsibility, Planful problem solving and Positive reappraisal, with emotion-

focused coping methods predominant. The people who reported working presented higher mean scores for the factors Confrontive coping, Self controlling, Seeking social support, Planful problem solving and Positive reappraisal in relation to the people who reported not working, and the predominant coping methods were problem-focused.

With a value of $p < 0.006$, there were no statistically significant associations between the variables studied, however the results are highlighted for the variables Age group for the factor Positive reappraisal and Work for the factor Planful problem solving, with the lowest p values indicating that the people in adulthood (18 to 59 years) reported more than the elderly (60 years or more) the coping methods related to the factor Positive reappraisal of the CSI, and the people who worked reported more frequently the coping methods related to the factor Planful problem solving, i.e. predominantly problem-focused coping methods. Similarly statistical significance was not observed in the study of continuous variables, for which the Spearman correlation test was applied, which showed no statistically significant correlations, however, for the variable Time on hemodialysis in the factor Positive reappraisal, the p value was 0.008, which may indicate a greater reporting of coping methods related to the factor positive reappraisal among those people with longer durations of hemodialysis, with emotion-focused coping methods predominating.

DISCUSSION

The predominance of males in the population studied (62.2%) was similar to results found in another study of people with CRF on hemodialysis, also performed within the state of São Paulo, however, no studies were found regarding the prevalence of CRF according to gender⁽¹³⁾. The number of people on renal replacement therapy has increased and is accompanied by an increase in the age of new cases of CRF, both can be explained by the longer life expectancy of the population and by the increasing elderly population, which leads to increased incidence and prevalence of chronic illnesses, such as diabetes mellitus, arterial hypertension and cardiovascular diseases, causes of CRF worldwide. In Brazil, 25.5% of the people on hemodialysis are aged ≥ 65 years⁽⁶⁾. In this study the highest mean score found was for the factor Positive reappraisal and the lowest for the factor Confrontive coping, with greater reporting of emotion-focused coping methods⁽²⁾.

Emotion-focused coping involves strategies that replace negative emotions and prevent engagement in actions to solve the problems. People also use these strategies when a problem is uncontrollable. The strategies for this coping method can be divided into behavioral and cognitive. For example: the excessive use of harmful substances such as alcohol, tobacco and drugs, excessive physical activity, avoidance, minimization of the problem, distancing, selective attention, mediation and feelings of

relief⁽²⁾. Positive reappraisal, within the emotion-focused coping methods, is a coping strategy aimed at controlling the emotions that are related to grief as a form of reinterpretation of the conflicting situation, growth and personal change⁽¹⁴⁾. A study of coping methods in men on hemodialysis in Canada, using the original version of the CSI, obtained the highest mean score for the factor of Seeking social support and the lowest mean score for the factor Confrontive coping⁽¹⁵⁾. Other studies have been developed, classifying the coping methods of people on hemodialysis as both emotion-focused and problem-focused, however, they showed a predominance of problem-focused coping methods^(4-5,9,15). A study on the coping methods of people on hemodialysis, performed in Australia, found better results with the choice of problem-focused coping methods, which presented a positive correlation with improved quality of life⁽⁵⁾. The coping methods related to avoidance were considered predictors for depression in people on hemodialysis⁽⁹⁾. Problem-focused coping: involves strategies to solve problems, which include defining them, generating alternatives, weighing them in terms of cost and benefits and choosing an action. The strategies can also be directed inward, the individual can change something within themselves instead of changing the environment⁽²⁾.

Regarding gender, it was highlighted that the women reported emotion-focused coping methods with greater frequency. In another study performed with people on hemodialysis, the women also presented higher scores for the emotion-focused coping methods, and the men, for problem-focused coping methods. Some authors found a positive relationship between the female gender, anxiety and emotion-focused coping methods, suggesting that women on hemodialysis tend to report more emotion-focused coping methods due to their anxiety^(10,16). Concerning age, the elderly people presented higher mean scores for the factors Confrontive coping, Distancing and Escape-avoidance. The literature describes a positive correlation between increasing age of people on hemodialysis and increased depression, and that older people on hemodialysis have less depression when they use avoidance as a coping method⁽¹⁰⁾.

The Confrontive coping methods correspond to the offensive strategies for coping with the situation, in which the people present an active situation in relation to the stressor. In contrast, the coping methods of Distancing correspond to defensive strategies, where the individual avoids confronting the threat and does not change the situation. The coping methods of Escape-avoidance consist of fantasizing about possible solutions to the problem, without taking action to modify them. They can be described as efforts to escape and/or avoid the stressor⁽¹⁴⁾. In this study, 63.5% of the interviewees reported having a partner, 88.8% lived with family members and 79.4% had someone who accompanied their treatment. The high perception of social support of the people on hemodialysis may be associated with increased life satisfaction, less depression and decreased risk of mortality⁽¹⁷⁾. Some au-

thors describe the coping methods of Seeking social support as strategies related to the support encountered, in the people and the environment, and present three different aspects: seeking social support to find solutions; the emotional support of friends and family members; and the support of professional⁽¹⁴⁾.

Concerning schooling, the people with education ≥ 12 years had a prevalence of problem-focused coping methods in relation to people with less education. In other studies people with high levels of education presented less depression when they reported more problem-focused coping methods⁽¹⁰⁾. Only 9.3% of the interviewees reported any work activity. They referred to the difficulty of maintaining employment due to the time spent on hemodialysis, and the difficulty of insertion into the labor market after starting hemodialysis. Authors report that the majority of people on hemodialysis do not work because they do not present physical conditions to perform working activities, particularly those people aged between 18 and 59 years, considered economically active in society⁽¹⁸⁾.

According to the literature found, the emotion-focused coping methods have a positive association with work, however, the problem-focused coping methods do not. There is also a positive association between physical impairment and work among men. The people who worked had less depression, and the women who worked were less anxious⁽¹⁹⁾. Financial problems were the fifth most frequently mentioned stressor by the population studied in a multicenter study performed in Hong Kong, followed by restrictions on fluid intake, dietary changes, itching, and fatigue⁽⁴⁾. In this regard, health policies to meet the needs of people with CRF on hemodialysis should take into con-

sideration not only the improvement of the clinical care provided but also support for the economic difficulties faced by these people and their families.

CONCLUSION

In general, the coping methods that obtained higher scores were related to the factor Positive reappraisal, with a predominance of the emotion-focused coping methods. However when smaller groups, classified according to the sociodemographic variables, were analyzed a predominance of emotion-focused coping among the elderly, the women and the people with greater duration of hemodialysis was identified; with problem-focused coping among men, the people who reported work activities and the people with ≥ 12 years of schooling.

Knowledge of coping methods specific to each group is important for nurses and other health professionals to know which coping methods people tend to use within each group, and to be prepared to improve or seek, together with the people with CRF on hemodialysis, positive coping methods. The development of educational interventions that strengthen the social support offered by health professionals is also highlighted, to minimize the negative effects of the stressors and to teach effective coping strategies. The analysis was based on the clinical aspects of the results and not on the statistical significance, probably due to the limitation of the size of the sample studied. To identify the sources of stress and, above all, the coping methods is to seek to comprehend how a person experiences their disease and to propose actions that allow the development of the adaptive mechanisms of the person and their family members.

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