Dyadic Relationship and Quality of Life Patients with Chronic Kidney Disease

Relação Diádica e Qualidade de Vida de Pacientes com Doença Renal Crônica

Autores
Nuno Eduardo Roxo Rodrigues Cravo Barata [1,2]

[1]Universidade do Porto.
[2] Universidade Portucalense.

Data de submissão: 28/08/2014.
Data de aprovação: 05/03/2015.

Correspondência para:
Nuno Eduardo Roxo Rodrigues Cravo Barata.
Universidade Portucalense.
Rua D. Pedro V, 113, 5.º W.,Vila Nova de Gaia Portugal.
CEP: 4400-677.
E-mail: nunob@upt.pt

DOI: 10.5935/0101-2800.20150051

Abstract

Introduction: Chronic Renal insufficiency (CRI) and dialysis treatment lead to a succession of situations for kidney chronic patient, which compromises his aspect, not only physically, and psychologically, with personal, family and social repercussions. **Objective:** (1) to verify the existence of differences of dyadic adjustment (DA) according to renal replacement treatment (RRT) and (2) verify the existence of differences quality of life (QOL) in accordance with the RRT. **Methods:** This is a cross-sectional study of a descriptive nature through surveys, exploratory and correlational. The sample consisted of 125 participants. Of these, 31 were to be made RRT by automated peritoneal dialysis (APD) and 94 hemodialysis (HD). Participants were selected from three renal centers: (1) Centro Renal da Prelada (Porto, Portugal), (2) Centrodial (S. João da Madeira, Portugal) and Centro Renal da Misericórdia de Paredes (Paredes, Portugal). The study was carried out for 6 months. The following instruments were applied: Socio-demographic and clinical questionnaire (SDCQ), Dyadic Adjustment Scale (DAS), World Health Organization Quality of Life (WHOQOL-Bref). **Results:** The results demonstrate the existence of statistically significant differences between the type of RRT and most areas of QOL, as well as the existence of statistically significant differences between the subscales of the DAS evaluated and the type of RRT. **Conclusion:** The present study demonstrates a greater commitment in terms of QOL of individuals undergoing treatment for HD when compared with those subjected to APD. It turns out, also, that DA is most strongly perceived by patients in APD than with HD.

Keywords: quality of life; renal replacement therapy; social adjustment.

Resumo

Introdução: A Insuficiência Renal Crônica (IRC) e o tratamento dialítico provocam uma sucessão de situações para o doente renal crônico, que compromete o seu aspecto, não só físico como psicológico, com repercussões pessoais, familiares e sociais. **Objetivo:** (1) verificar a existência de diferenças do relacionamento diádico (RD) de acordo com o Tratamento Substitutivo Renal (TSR) e (2) verificar a existência de diferenças da qualidade de vida (QDV) de acordo com o TSR. **Métodos:** O presente estudo transversal é de carácter descritivo mediante inquéritos, exploratório e correlacional. A amostra é constituída por 125 participantes. Destes, 31 encontravam-se a efectuar TSR por diálise peritoneal automatizada (DPA) e 94 por hemodiálise (HD). Os participantes foram selecionados de três centros renais: (1) Centro Renal da Prelada (Porto); (2) Centrodial (São João da Madeira); e Centro Renal da Misericórdia de Paredes (Paredes). O estudo realizou-se durante 6 meses. Aplicou-se os seguintes instrumentos: Questionário Sociodemográfico e clínico (QSD&C); Dyadic Adjustment Scale (DAS); World Health Organization Quality of Life (WHOQOL-Bref). **Resultados:** Os resultados demonstram a existência de diferenças estatisticamente significativas entre o tipo de TSR e a maioria dos domínios de QDV, bem como, a existência de diferenças estatisticamente significativas entre as subescalas do Ajuste Diádico avaliadas e o tipo de TSR. **Conclusão:** O presente estudo demonstra um maior comprometimento ao nível da QDV dos indivíduos submetidos a tratamento por HD quando comparados com os submetidos à DPA. Verifica-se, igualmente, que o AD é mais fortemente percebido pelos pacientes em DPA do que com HD.

Palavras-chave: ajustamento social; qualidade de vida; terapia de substituição renal.

Introduction

Chronic kidney disease (CKD) and dialysis treatment lead to a succession of situations for chronic kidney patient, which compromises his aspect, not only physically, and psychologically, with personal, family and social repercussions. For Riella,[1] chronic renal patient experiences a sudden change in life, live with limitations, with the painful treatment that is hemodialysis, spend time thinking about death, but coexists with the possibility to undergo a kidney transplant and the expectation of improving their quality of life. Consequently, Lima & Gualda[2] report that chronic renal patients end up getting discouraged, desperate and often, for these reasons or for lack of guidance, eventually abandoning the treatment or do not give importance to the constant care that should have. It is therefore necessary to stimulate their abilities to adapt positively to new lifestyle and take control of their treatment.

All aspects of life are affected by kidney disease and its treatment, and the effects extend to all people who have a closer involvement with the patient.[3] A better understanding of the anxieties and concerns of patients on a daily basis allows professionals who work in Nephrology units responding with appropriate support.[4] It has to start as early as possible to avoid problems, both practical and material (for example related with employment or financial situation) or emotionally (as is the case of the problems in personal relations and unnecessary fears prognosis and treatment).[3]

So, faced with a crisis or illness, the subject tends to make use of all its resources available, struggling to promote his self-balance, which was supposed to possess and how he feels being threatened. Therefore, it seems more or less clear that the social network of support is one of the important variables that can intervene in a beneficial or malevolent way in a crisis or illness.[5] It is therefore very important to assess the level of marital relationship and dyadic adjustment (DA) perceived by patients with CRI, providing relevant information for the knowledge of variations in terms of psychological well-being related to health and disease, and also with the quality of life from variables such as depression, self-esteem preserved and acceptance of renal substitutive treatment. Given this, it seems clear that the supportive family and friends acts as a lever for the maintenance of the balance of the patient, taking into account changes of individual habits and the continued promotion of behaviors that improve overall health, involving people who also give assistance to the patient.[6]

One can consider, that social support (SS) is the result of positive or negative action of the relationships perceived by individuals, which meets definitions of Sarason *et al*.[7] Roughly speaking, it seems apparent that the in SS, the dyadic adjustment may function as precursor of a better adaptability of individuals suffering from CRI, likely to increase optimism and positivity, as well as the quality of life of these same individuals have strong relationship between everyone, since the renal treatment strongly influence the physical and mental level.[8]

As noted earlier, it seems appropriate to systemize the psychosocial implications inherent in this health problem, since people who face CRI suffer a devastating impact on the social and psychological state, either as a direct consequence of the effects of the disease and treatments, and either indirectly by the implications of these same effects on personal performance. Recently, the attention of health professionals began to turn to a therapy aimed at improving chronic renal patient QOL as a relevant factor in the setting of renal therapy, and not only the extension of his life.

In relation to chronic renal patient to achieve a better QOL, this goal is always present in your everyday life, and its indicator of QOL or wellbeing is extremely different from an individual considered healthy, because their health goals focus on achieving a level of life/health compatible with a life with dignity and independence.[9] It is obvious that in recent decades, due to the onset of renal replacement treatment (RRT) and adjuvant therapy,[9] there have been technological advances and considerable therapeutic allowing a better well-being of these patients, particularly in racing to his longevity and permanence of some of its capabilities (even if it is not possible to enjoy a full quality).

The problem of CKD and its influence on QOL of individuals can be better understood if Complete with brief patho-physiological considerations of CKD framework, therefore, reach a certain level of health and QOL depends a lot of uncertainties and fears about the future; family concerns; sleep disturbance; occupational limitations due to dialysis; lack of vitality; too much time spent on treatments; dietary restrictions; medicated schemes; technical

problems with equipment; and fear of complications during dialysis. Similarly, several authors point to the persistence of depressive symptoms, low self-esteem, fear of rejection and side effects of renal substitutive therapy, influencing individual's CKD carrier QOL.[10-12]

Method

In the present study, there will be an analysis of the relationship between the DA and the QOL of people with CKD. It is thus a transversal study of descriptive nature, exploratory and correlational with the sense of contributing to a greater understanding of the importance of the DA in the QOL of people with CKD and the alleged predictive values of DA.

The objective of this study are to (1) verify the existence of differences of dyadic adjustment (DA) according to renal replacement treatment (RRT) and (2) verify the existence of differences quality of life (QOL) in accordance with the RRT.

Material

Social-demographic and clinical questionnaire: For collection and evaluation of socio-demographic and clinical data was constructed a questionnaire taking into account the preferential items of this investigation. In order to characterize the sample, we proceeded to the elaboration of a social-demographic and clinical questionnaire (SDCQ). It consists of 24 items: 3 items are of a general nature, 8 items are socio-demographic in nature, 11 items are clinical in nature and last items 2 that allow the interviewee to talk about the study and on the SDCQ.

Dyadic Adjustment Scale: to evaluate the DA appealed to the Dyadic Adjustment Scale (DAS) Spanier.[13,14] This scale pioneered by integrating all cohabiting couples, whether married or not. The DAS is composed of 32 items, which seek to assess marital adjustment, using Likert-type scales: scales are used five, six and seven points. Generally speaking, the extreme points of the scales mean «never» and «all time», respectively. The items 29 and 30 have only two options, "yes" or "no". So, to increase the reliability of the scale, some items are positive affirmations and other are negative remarks. The total scale can vary from 0 to 151 and is obtained by summing the values obtained in the four scales. Individuals who obtain 101 points or less must be classified as in the experience of a relationship of suffering or misfit and people who reach 102 points or more would be experiencing a relationship without suffering or well adjusted. The DAS seeks to measure the following dimensions: (a) dyadic consensus, which assesses the dyadic level of lack of concordance of the couple on a variety of key issues in relationship (leisure, religious, financial, friendships, conventionality, philosophy of life, business with relatives, goals, time spent together, decision-making, housework, leisure time and occupational decisions; (2) dyadic satisfaction, measuring the lack of discussion issues of divorce, out of the House after an argument, to repentance with the marriage, the mutual pet peeve, quarrels, the well-being, confidence in the spouse, to kiss the spouse, the degree of happiness and the commitment to the future relationship; (3) dyadic cohesion, which examines sense of emotional couple shares, measuring the relative lack of mutual interests, the stimulation of ideas, the fun set, quiet discussion and to work together on projects; (4) dyadic expression of affection, which measures lack of agreement of spouses on demonstrations of affection, sexual relations, lack of love and refusals to sex.[13,15-17]

Quality of life questionnaire: quality of life was evaluated through the Whoqol-Bref (Whoqol-Group, 1998).[18] Whoqol-Bref consists of 26 questions: two on global health and illness (QOL) and the other representing each one of the 24 facets that make up the Whoqol-100 (Pain and discomfort; Energy and fatigue; Sleep and rest; Mobility; Activities of daily life; Dependence on medication or treatments; Ability to work; Positive feelings; Think, Learn, Memory and concentration; Self-esteem; Body image and appearance; Negative feelings; Spirituality/ Religion/personal beliefs; Personal relationships; Social support; Sexual activity; Physical security and protection; Home environment; Financial resources; Health and social care: availability and quality; Opportunities to acquire new information and skills; Participation in recreation/leisure opportunities; Physical environment (pollution/noise/traffic/ weather); and Transportation). All these items can be grouped into four areas: Area 1 - physical Domain (items 1, 2, 3, 9, 10, 11 and 12); Area 2 - psychological Domain (items 4, 5, 6, 7, 8 and 24); Field 3 - social relationships domain (items 13, 14 and 15); 4 domain-environment (16, 17, 18, 19, 20, 21, 22 and 23). The abridged version such as the Whoqol-100 (long version) presents a Lickert scale type response,

in which the total values oscillate between 0 and 100, with higher values of QOL synonyms.[19,20]

Procedure

The investigation began with the request and subsequent authorization for the use of instruments used. Then it was settled a protocol establishing the principles and procedures inherent in the present investigation; the research project was initiated with the (a) presentation to the Clinical centers, to be granted authorization to start the study; (b) the investigation followed the fundamental principles such as the right to dignity, security and well-being of the respondent, as well as the respect for him; (c) in addition, the participants were informed about the purpose and procedures of investigation involving, if they so wish, in the absence of any pressure or coercion on its participation; (d) the interview is confidential and the participant does not had the obligation to respond, and could end the same when find timely; (e) all questionnaires were filled in by the investigator due to postural difficulties of the participants throughout the treatment for renal dialysis substitutionary technique. Therefore, we decided to do the same for the participants, who have renal substitutive treatment for automated peritoneal dialysis, thus giving a certain consistency to this research; (f) when a subject did not understand some of the issues raised by the investigator, it was given the right to explain as many times as necessary until the complete understanding and reasoning; (g) for the optimization of best results in the responses given by participants, account has been taken of the physical and mental suffering throughout the interview, being that, in some situations we decided to evaluate the same subject for two days; (h) all participants have been selected in accordance with the consent of the same in collaborating, as well as according to their physical and mental capabilities. The collection of data, in present study, was carried out between September 2008 and May 2009. Data were related with the last six months and the interviews were conducted in the last month of investigation.

Patients undergoing treatment for HD were interviewed during the renal substitutive treatment and patients undergoing treatment for APD were interviewed after a pre schedulling of time and place. Furthermore, all patients had to answer questions from SDCQ, DAS, Whoqol-Bref and HADS. The interview took, on average, 40 minutes (23-79 minutes) (41 minutes for individuals in RRT for HD and 36 minutes for individuals in RRT by DPA), being that, given the specificity and duration of treatment of patients in HD, the interviews tended to be longer given that, sometimes, the rhythm of the same would have to be slowed down depending on the patient's conditions and generally, corresponded to cases in which individuals asked for help to clarify some issues about their problems.

To assure that responses were feasible, the investigator was always the same throughout the interview and the fact that it is completed by the investigator himself may possibly have diminished some limitations inherent in the fills of the questionnaires, such as: (I) the retrospective bias (tendency to minimize or exaggerate the symptomatic subject perception at the time of inventory administration); (II) the social desirability bias (tendency to respond to the inventory according to what's socially correct and expected); (III) the random responses bias (when the responder is not motivated or when it is not able to respond. In this case, the subject select the reply in an almost randomized way, without any criteria). We also shall state that the fact that the investigator administer and quote the instruments items, can possibly have diminished the impact of issues related to fidelity.

Results

Sample

The sample consists of 125 participants with CKD. Of these, 31 were using RRT by CAPD and 94 are effecting RRT for HD. participants were selected from three kidney centers: (1) Renal Center of Prelada (Porto); (2) Centrodial (São João da Madeira); and (3) Kidney Center of Misericórdia da Paredes (Paredes). The study took place during six months (24 weeks). It should be noted at the outset that the sample is not probabilistic, being the type of sampling by rational selection.

All participants obeyed the following inclusion criteria: 1. Have CKD diagnosis; 2. Have more than 18 years of age; 3. Live in cohabitation in whole or in part; 4. Have full knowledge and be well informed about your diagnosis; 5. Do not present a disturbance state of consciousness; 6. Do not submit most significant disease than CKD, except those resulting from the CKD itself; 7. Have given consent to participate in the study (informed consent).

A total of 125 individuals were evaluated, who fulfilled the inclusion criteria of the study. Socio-demographic characteristics of 125 individuals are expressed in Table 1.

Table 1 Description of the sample - socio-demography

Demographic variables	Values obtained (N = 125)
Gender	
Female	64 (51.2%)
Male	61 (48.8%)
Age (average)	61.06
Amplitude	24-87
SD	15.60
Years of average school attendance	5.38
Amplitude	0-17
SD	4.20
Cohabitation	
Cohabitation - total (marriage, domestic partnership)	76 (60.8%)
Partial cohabitation (girlfriend, lover)	49 (39.2%)
Profession	
Active	35 (28%)
Employees	26 (20.8%)
Full-time	21 (16.8%)
Part-time	5 (4%)
Domestic workers	9 (7.2%)
Not Active	90 (72%)
Pensioners	71 (70%)
In Advance	43 (34.4%)
Not in Advance	38(30,4%)
Unemployed	9 (7.2%)
Unemployed	
Porto	97 (77.6%)
Aveiro	28 (22.4%)

It turns out that there is a balanced distribution between the two sexes in the sample studied, and there is a huge variability in terms of age and schooling.

The vast majority is in a situation of no activity, i.e. can be retired (in advance or not) or unemployed. It should be noted, also, that the majority of the sample resides or carries out treatments in the Porto district.

An analysis to the clinical variables we can mention that 75 of the patients interviewed have a pathology, *diabetes mellitus*, in co-morbidity, representing 60% sample. Note, also, that diseases which may have caused the CKD most representative in this population were arterial hypertension in 40 patients and *diabetes mellitus* in 35 patients. Reading the table indicates that 94 of the individuals participating in the study are on Hemodialysis and 31 individuals in APD. Of the total of 125 individuals that make up the sample more than half (52.8%) presents the clinical parameters changed (Table 2).

Table 2 Description of the sample in clinical terms

Clinical variables	Values obtained (N = 125; %)
Associated commorbility (*diabetes mellitus*)	
Yes	75 (60%)
No	50 (40%)
Type of disease related to causes of CKD	
Arterial Hypertension	40 (32%)
Diabetes Mellitus	35 (28%)
Glomerulonephritis	30 (24%)
Obstructive Uropathy	4 (3.2%)
Polychistic Kidney	8 (6.4%)
Hereditary Disease	7 (5.6%)
Another	1 (0.8%)
Renal replacement treatment type	
Hemodialysis	94 (75.2%)
Automated Peritoneal Dialysis	31 (24.8%)
Clinical parameters	
Normal	59 (47.2%)
Abnormal	66 (52.8%)

Differences between QOL and the RRT type

There was no missing data in the Whoqol-Bref. In Table 3 are expressed the mean values, standard deviations, as well as the significance value obtained from the differences between the subjects on Automated Peritoneal Dialysis and Hemodialysis.

It should be noted, that the scales of the Whoqol-Bref are coded so that higher values correspond to better QOL. There are statistically significant differences in the various Domains of the Whoqol-Bref, being that the subjects who underwent treatment by APD always obtain higher values than the subjects who underwent treatment for HD.

Differences between the perceived dyadic adjustment and dialysis modality that patient with CKD are submitted.

The results show an analysis of dichotomized DA an important relationship between the DA and the kind of RRT (Table 4). Therefore, the results allow us to highlight the dependence of both variables, being that one is always predictive of another. In this

Table 3 Values obtained in the whoqol-bref instrument according to the RRT type

Whoqol-Bref	Type of RRT	N	M	SD	*p*
General health domain	Hemodialysis	94	40.85	14.07	.000**
	Automated Peritoneal Dialysis	31	54.87	14.31	
Physical Domain	Hemodialysis	94	43.69	13.89	.000**
	Automated Peritoneal Dialysis	31	61.65	12.65	
Psychological Domain	Hemodialysis	94	45.96	12.21	.000**
	Automated Peritoneal Dialysis	31	56.06	11.39	
Social Relationships Domain	Hemodialysis	94	48.87	12.76	.001**
	Automated Peritoneal Dialysis	31	57.81	11.25	
Environment Domainn	Hemodialysis	94	45.23	12.16	.000**
	Automated Peritoneal Dialysis	31	60.58	15.58	

* significance; a $p <. 01$; ** significance a $p <. 05$.

Table 4 Relationship between DA (dichotomized) and RRT type

			Renal Replacement Treatment type		
			HD	APD	Total *p*
Dyadic Adjustment	Bad adjustment	Mesure	70	4	74
		Expected frequencies	55.6	18,4	74.0
		% in line	94.6%	5.4%	100,0%
		Adjusted waste	6.0	-6.0	
	Good adjustment	Mesure	24	27	51 0.000**
		Expected frequencies	38.4	12.6	51.0
		% in line	47.1%	52.9%	100.0%
		Adjusted waste	-6.0	6.0	
	Total	Mesure	94	31	125
		% in line	75.2%	24.8%	100.0%

* significance a $p < 0.01$; ** significance a $p < 0.05$.

sense, and so that we can have more concrete results we decided to analyze the subscales of the DAS (not dichotomized) in relation to the type of RRT, and the results achieved through the *t* Student test suggests the existence of statistically significant differences, revealing the existence of a relationship between the variables evaluated (Table 5).

Discussion

In relation to demographic variables, there is a balanced percentage of women and men, what is in accordance with some studies.[21-24] The variability in terms of education reflects well the heterogeneity of users of Kidney Centers. However, the average schooling of the sample seems to mirror some of the usual difficulties that users of the Renal Centers have in filling of self-report instruments, by which, we opted for assisted administration of instruments used in this study.

The present study demonstrates a greater commitment in terms of QOL of individuals undergoing treatment for HD when compared with those subjected to APD. This may be due to the commitment that the kind of treatment takes, since, during that period the activity is null, being systematically dependent on the treatment, whereas in the APD individuals can maintain their daily routines.[21-23] Therefore, there is a greater commitment

Table 5 Values obtained in the DAS instrument according to the RRT type

DAS	RRT type	N	M	SD	*p*
	Hemodialysis	94	35.47	13.82	
DAS Cons.					.000**
	Automated Peritoneal Dialysis	31	49.32	7.61	
	Hemodialysis	94	24.60	12.20	
DAS Sat.					.000**
	Automated Peritoneal Dialysis	31	39.61	7.88	
	Hemodialysis	94	12.98	4.36	
DAS Cohes.					.000**
	Automated Peritoneal Dialysis	31	16.97	3.72	
	Hemodialysis	94	7.06	2.54	
DAS Exp.					.050*
	Automated Peritoneal Dialysis	31	8.06	2.10	
	Hemodialysis	94	80.03	23.84	
DAS Tot.					.000**
	Automated Peritoneal Dialysis	31	113.81	9.25	

DAS Cons.: Consensus Dyadic adjustment scale; DAS Sat.: Dyadic adjustment scale Satisfaction; DAS Cohes.: Cohesion, Dyadic adjustment scale; DAS Exp.: Dyadic adjustment scale Expression of affection; DAS Tot.: Total Dyadic adjustment scale; * significance a $p < .01$; ** significance a $p < 0.05$.

in the fields of QOL[23] with significant losses in terms of physical dimensions and is also patent the commitment of some physical, social and emotional aspects. Thus, the CRI and the HD treatment and APD are a medical condition with a significant impact on patient's QOL and also physical conditions are typically affected.[24-26] All the CKD experience may suffer major changes, especially in the patient in HD, since changes are present in everyday bodily activities as well as recreational.[27]

It turns out, also, that DA is most strongly perceived by patients in APD than with HD, once that the treatment could be not as negative for the subsystem of the couple adopting an affective protection and where the healthy spouse offers support and help and increase self-confidence and the ability to implement adjusted behavior. Consequently, and in accordance with the present study, a smaller dyadic adjustment, present in HD patients, may be synonymous of less protection factor against stress and vulnerability that these individuals are exposed. It also noted the existence of severe loss, and this is usually huge and lasting for the patient with kidney disease in HD, renal function, sense of well-being, of its role both in the family and at work, loss of time, financial resources, sources of sexual function, among others[24] with highly painful reflections on dyadic relationship of these patients. Given the changes highlighted, there is in many cases a desperate resignation that influences negatively in overcoming traumatic situation.

This research is limited, because the results obtained should not be regarded as representative of the Portuguese population with CKD, since the process of selection of the participants for the study was restricted to only three kidney centers, which may have caused a bias in the results obtained.[28] Another limitation concerns the transverse nature of study what inhibits from making any statement with respect to directionality and causality. It would be essential to draw longitudinal character studies, which make it possible to infer causality relationships between the variables studied. Thus, it will be important to follow individuals with CRI and evaluate them for a certain period of time. Therefore, we will try to obtain a temporal relationship between the factors of exposure and the characteristic being studied.

Conclusion

It is concluded with the present study, that (1) the type of RRT affects the perception of QOL of individuals with CKD; (2) a better understanding of DA implies a better understanding of QOL, and (3) better understanding of DA in CKD subjected to RRT by APD.

References

1. Almeida FA. Hipertensão arterial essencial. In: Riella MC. Princípios de nefrologia e distúrbios hidroeletrolíticos. 3a ed. Rio de Janeiro: Guanabara-Koogan; 1996. p.503-22.
2. Lima AFC, Gualda DMR. Reflexão sobre a qualidade de vida do cliente renal crónico submetido a hemodiálise. Nursing (São Paulo) 2000;3:20-3.
3. Bradley C, McGee H. Improving quality of life in renal failure: ways forward. In: McGee H, Bradley C, eds. Quality of life following renal failure. Chur: Harwood Academic Publishers; 1994. p.275-99.
4. Williams A. Economics of coronary artery bypass grafting. Br Med J (Clin Res Ed) 1985;291:326-9. DOI: http://dx.doi.org/10.1136/bmj.291.6491.326
5. Silva CN. Como a rede social interfere numa crise emocional. Rev Bras Neurol Psiquiatr 1997;1:78-91.
6. Kaveh K, Kimmel PL. Compliance in hemodialysis patients: multidimensional measures in search of a gold standard. Am J Kidney Dis 2001;37:244-66. PMID: 11157365 DOI: http://dx.doi.org/10.1053/ajkd.2001.21286
7. Sarason IG, Levine HM, Basham RB, Saranson BR. Assessing social support: The Social Support Questionnaire. J Pers Soc Psychol 1983;44:127-39. DOI: http://dx.doi.org/10.1037/0022-3514.44.1.127
8. Herek GM, Levy SM, Maddi SR. Psychological aspects of serious illness: chronic conditions, fatal diseases, and clinical case. Washington: Rand; 1990.
9. Collier J, Watson AR. Renal failure in children: specific considerations in manageament. In: McGee H, Bradley C, eds. Quality of life following renal failure: psychosocial challenges accompanying high technology medicine. Chur: Harwood Academic Publishers; 1994. p. 211-45.
10. Altschuler J. Working with chronic illness. London: MacMillan Press; 1997.
11. Eiser C. Growing up with a chronic disease: the impact on children and their families. London: Jessica Kingsley Publishers; 1993.
12. Fedewa MM, Oberst MT. Family care giving in pediatric renal transplant population. Pediatr Nurs 1996;22:402-7.
13. Spanier GB. Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. J Marital Fam 1976;38:15-28. DOI: http://dx.doi.org/10.2307/350547
14. Spanier GB. Improve, refine, recast, expand, clarify--don't abandon. J Marital Fam 1985;47:1073-4. DOI: http://dx.doi.org/10.2307/352354
15. Hernandez J. Avaliação Estrutural da Escala de Ajustamento Diádico. Psicol Estud 2008;13:593-601. DOI: http://dx.doi.org/10.1590/S1413-73722008000300021
16. Spanier GB, Cole CL. Marital adjustment over the family life cycle: the issue of curvilinearity. J Marital Fam 1975;37:263-75.
17. Spanier GB, Thompson L. A confirmatory analysis of the dyadic adjustment scale. J Marital Fam 1982;44:731-8.
18. WHOQOL-Group. Development of World Health Organization WHOQOL-Bref Quality of Life Assessment. Psychological Medicine. 1998; 28: 551-58.
19. Canavarro MC, Vaz Serra A, Quintas L, Pereira M, Simões M, Quartilho MJ. et al. Desenvolvimento dos instrumentos de avaliação da qualidade de vida da Organização Mundial de Saúde (WHOQOL-100; WHOQOL-bref) para português de Portugal: Apresentação de um projecto. Comunicação apresentada no II Congresso de Saúde e Qualidade de Vida. Porto: Portugal; 2005.
20. Pereira M, Canavarro MC, Vaz Serra A, Gameiro S, Corona C, Simões M. et al. Validação dos instrumentos de avaliação da qualidade de vida da Organização Mundial de Saúde (WHOQOL-100; WHOQOL-bref) para português de Portugal: desenvolvimento das escalas de resposta. Comunicação apresentada no II Congresso de Saúde e Qualidade de Vida. Porto: Portugal; 2005.
21. Barata NC. Insuficiência renal crónica: relação diádica e qualidade de vida. Porto: Livpsic; 2013.
22. Barata NE, Meneses RF. Avaliação da qualidade de vida do insuficiente renal crónico. Saúde e qualidade de vida em análise. Porto: ESEP; 2008. p.269-91.
23. Trentini M, Corradi EM, Araldi MA, Tigrinho FC. Qualidade de vida das pessoas dependentes de hemodiálise considerando alguns aspectos físicos, sociais e emocionais. Texto Contexto Enferm 2004;13:74-82.
24. DeOreo PB. Hemodialysis patient-assessed functional health status predicts continued survival, hospitalization, and dialysis--attendance compliance. Am J Kidney Dis 1997;30:204-12. DOI: http://dx.doi.org/10.1016/S0272-6386(97)90053-6
25. Mingardi G, Cornalba L, Cortinovis E, Ruggiata R, Mosconi P, Apolone G. Health-related quality of life in dialysis patients. A report from an Italian study using the SF-36 Health Survey. DIA-QOL Group. Nephrol Dial Transplant 1999;14:1503-10. PMID: 10383015 DOI: http://dx.doi.org/10.1093/ndt/14.6.1503
26. Romão Júnior JE, Pinto SWL, Canziani ME, Praxedes JN, Santello JL, Moreira JCM. Censo SBN 2002: informações epidemiológicas das unidades de diálise no Brasil. J Bras Nefrol 2003;25:188-9.
27. Castro M, Caiuby AVS, Draibe AS, Canziani MEF. Qualidade de vida de pacientes com insuficiência renal crónica em hemodiálise avaliada através do instrumento genérico SF-36. Rev Assoc Med Bras 2003;49:245-9. DOI: http://dx.doi.org/10.1590/S0104-42302003000300025
28. Ramalheira C, Varandas P. Prevalência de transtornos mentais e do comportamento em consultas de Psiquiatria. Psiquiatr Clín 2000. Número especial:11-25.