

## QUALITY OF LIFE OF PATIENTS WITH CHRONIC RENAL INSUFFICIENCY IN HEMODIALYSIS: AN INTEGRATING REVIEW

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### ABSTRACT

**Introduction:** The growing index of chronic renal patients who make use of renal replacement therapy sharpens the interest of health professionals to improve the quality of life of this population. **Objective:** Evaluate through an integrative review, which factors of the most affected quality of life in chronic kidney dialysis patients. **Method:** Integrative review of the literature using the bases: Latin American and Caribbean Literature in Health sciences (LILACS), Medical Literature Analysis and Retrieval System Online (MEDLINE), Nursing Database (BDENF) e Index Technical-Scientific periodic psychology (INDEX PSI), through the descriptors in health sciences (DeHS): patients, chronic terminal renal failure, hemodialysis, quality of life, which were integrated by means of the logical operator booleano “AND”. **Results:** In this integrative review, 106 articles were analyzed on the topic addressed, the final sample of the survey was therefore of 12 articles that were related to the thematic and objectives of this research, in the articles analyzed it was identified that the most affected scores were related to the physical function and related to the professional part. It was evidenced that the elderly has a better quality of life compared to adults. **Final considerations:** The quality of life of chronic renal patients in use of hemodialítica therapy, impact due to the need to adapt to the new lifestyle, compatible with therapy. It is evident, the need to develop techniques to assist the professionals involved in this mission, being the professional nurse imbued with the responsibility of making a connection between these professionals involved.

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### INTRODUCTION

The terminal chronic renal insufficiency (TCRI) is a world health problem (Ebrahimi *et al.*, 2016). Currently, developing countries face an epidemic due to large-scale growth in cases of chronic renal insufficiency (CRI).

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The terminal chronic renal insufficiency can be set as the progressive loss and irreversible renal function, being classified according to the glomerular filtration rate (Ottaviani, 2016). The Diagnostic early and appropriate therapeutic conduct are determining factors in the delay in the progression of the disease, to minimize the suffering of patients. It is estimated in 500 million the number of people in the world who suffer from this disease, being that 1 million and a half is on regular dialysis program, mainly due to the overall increase in systemic arterial hypertension (SAH), diabetes mellitus

(DM) and obesity. In the 1960, with the development of hemodialysis as a therapeutic modality continues, the life expectancy of patients with TCRI increased, however, the quality of life of patients In Treatment is low, for affecting the lifestyle and consequently the quality of life (QL) of these patients (Regenga, 2016; Ebrahimi *et al.*, 2016). The term quality of life was reported in 1975 and described as the well-being, send a dynamic and changing process, that can to transform according to the system of values of individuals (Cuervas-Budhart *et al.*, 2017). Even with medical and technological advances regarding improving blood purification techniques, the chronic renal failure and your treatment remain causing physical changes, psychological and social for the people. The positive adaptation or not to these changes will dependent on most of the artifices that the person itself is able to create together with their family and multidisciplinary team (Lleixa *et al.*, 2016). The quality of life assessment in these patients is an important indicator de health and well-being, able being to determine the efficacy of health care, effects of treatment, acquisition of resources and the formulation of health policies (Ottaviani, 2016). In the face of the growing number of people in hemodialysis (HD) treatment in the current world, the present study seeks to evaluate the quality of life of these people through the research of scientific productions who have aimed to investigate the quality of life of patients with chronic renal failure in dialysis.

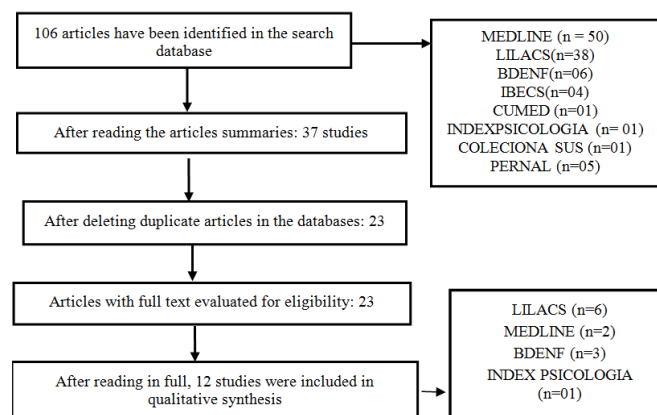
## MATERIALS AND METHODS

This is an integrative review of the literature, with a bibliographic and documentary approach in patients com TCRI in hemodialysis. The search was performed on the databases: Latin American and Caribbean Literature in Health sciences (LILACS), Medical Literature Analysis and Retrieval System Online (MEDLINE), Nursing Database (BDENF) e Index Periodic psychology Technical-Scientific (INDEX PSI), without limitation of the period of publication of the references, according to a following strategy, through the descriptors in health sciences (DeCS): patients, terminal chronic renal insufficiency, hemodialysis, quality of life, integrated through the operator booleano "AND". For the construction of the present revision were travelled the following steps: objectives of the Integrative review; establishment of inclusion criteria and deleting articles (sample selection); the information to be removed from the selected articles has been defined; analysis of results; discussion and presentation of the results. Was established as inclusion criteria for the sample of this research, all articles that have as main subject hemodialysis kidney, Quality of life and chronic renal insufficiency, the articles published in portuguese, english and spanish available in full and published in the national and international database.

Project of documents, monograph, thesis, congress and conference were excluded from the study. The variable used for analysis of the study was: quality of life. Just like, the type of data collection instrument most used in research in evaluating the quality of life of patients with chronic renal insufficiency in hemodialysis. The presentation of the results and discussion of the data was carried out in a descriptive way. The results have been made presented in summary form in tables and later confronted with the selected literature. As for the ethical aspects, as it is an integrative revision it was not necessary to go through the ethics Committee.

## RESULTS

From the analysis of the articles in accordance with the previously established inclusion criteria, the sample of the study was composed of 12 articles (Figure 1). The characterization of the selected samples was presented in Table 1.



**Figure 1. Flowchart of studies contemplated in research according to eligibility criteria**

Studies have shown that publications on the subject have started in 2003 in Brazil. The largest number of publications ran between 2008 and 2011 (Santos *et al.*, 2008; Kusumoto *et al.*, 2008; Braga *et al.*, 2011; Silva *et al.*, 2011; Takemoto *et al.*, 2011). Although publications have been found in some countries such as Arábia Saudita and Chile, most of the research was developed in Brazil (Santos *et al.*, 2014; Cavalcante *et al.*, 2013; Braga *et al.*, 2011; Silva *et al.*, 2011; Takemoto *et al.*, 2011; Kusumoto *et al.*, 2008; Santos *et al.*, 2008; Rudnick, 2007; Romão *et al.*, 2006; Castro *et al.*, 2003). In the databases LILACS six articles were found, (Santos *et al.*, 2014; Cavalcante *et al.*, 2013; Braga *et al.*, 2011; Silva *et al.*, 2011; Zúñga *et al.*, 2009; Santos *et al.*, 2008) where of these, five (Santos *et al.*, 2014; Cavalcante *et al.*, 2013; Braga *et al.*, 2011; Silva *et al.*, 2011; Santos *et al.*, 2008) where in the Brazil and one (Zúñga *et al.*, 2009) in the Chile. In Brazil These studies were developed in the city of Mogi das Cruzes – São Paulo, Belo Horizonte – Minas Gerais, São Luís - Maranhão, Rio Grande – Rio Grande do Sula, Sobral – Ceará and in the Chile, in three cities in the region of Bio-Bio: Concepcion, Talcahuano e Chillan. Of the studies found in the MEDLINE, one (Suja *et al.*, 2012) was carried out in the India, in the city of Kerala and the other in the Brasil (Castro *et al.*, 2003), in São Paulo. In the database BDENF research (Takemoto *et al.*, 2011; Kusumoto *et al.*, 2008) were carried out in the Brasil, em Guarapuava – Paraná, Ribeirão Preto – São Paulo and in São Paulo. And last, the study found in INDEX PSI was also developed, in the city of Porto Alegre – Rio Grande do Sul. In relation to the methodology applied in the articles, the largest number of studies have utilised the method the transversal design (Santos *et al.*, 2014; Cavalcante *et al.*, 2013; Braga *et al.*, 2011; Zúñga *et al.*, 2009; Santos *et al.*, 2008; Rudnick, 2007, Romão *et al.*, 2006). For the Collection Variable quality of life, the main instruments used in the studies were: KDQOL-SF (41,67%), SF-36 (25%), WHO-BREF (16,67%), Social support Scale and Quality of Life Index and stressors related to dialysis treatment (8,33%), interview recorded by tape recording (8,33%). In addition to these instruments, four articles (Santos *et al.*, 2014; Cavalcante *et al.*, 2013; Takemoto *et al.*, 2011; Rudnick, 2007) they used a questionnaire socio-demographic, as presented in the Table 1.

**Table 1. Studies on quality of life in patients with terminal chronic renal insufficiency in hemodialysis**

Origin	Author /year	Country	Research type	Subject	Data collection Instrument	Results
LILACS	Santos et al, 2014	Brazil	Cross	40 people in HD, both sexes, age range 18 to 92 years.	KDQOL-SF and Questionnaire demographic and social	In the generic functions the best scores were social function (80,94), the lowest a function so (46,88). In the specific issues of the chronic renal patient the best score was the stimulus on the part of the dialysis team (91,88) and the role of health professional (56,25) the smallest score.
LILACS	Cavalcante et al., 2013	Brazil	Cross	Population of chronic kidneys between 20 and 59 years in HD	KDQOL- SF Questionnaire demographic and social, clinical-nutritional and laboratory	The domain with worse levels of QL were: working situation, renal disease overload, patient satisfaction, physical function and general health. Schooling <8 years, origin of the inner city and presence of cardiovascular disease were associated with the areas with the worst levels of QL.
MEDLINE	Suja et al., 2012	Índia	Prospective, longitudinal, observational,	50 patients in regular HD and aged between 20 and 80 years.	WHO-BREF (WHO-100)	There was a score increase in the four domains (physical, psychological, environmental, social) between the group of patients compared to the control group, after counseling. Highlight for the psychological dominance that the score was higher compared to the other.
LILACS	Braga et al., 2011	Brazil	Cross	223 Patients ≥ 60 years in HD	KDQOL-SF	In the specific dimensions of the KQOL-SF the smallest average scores were: Renal disease overload (28,60); professional role (31,79) and patient satisfaction (18,68). In the generic dimensions (SF-36) the smallest scores were physical functioning (30,13); physical function (39,21) and general health (21,80).
LILACS	Silva et al., 2011	Brazil	Qualitative	9 People with TCRI in HD	Interviews recorded by tape recording.	The main difficulties were: restrictions on food and water habits, disability or limitation of physical, professional and leisure activities. The initial feelings of denial and indignation change as patients strengthen themselves to confront the disease.
BDENF	Takemoto et al., 2011	Brazil	Descriptive, exploratory	Elderly with 60 years and more, with CKD in HD of both sexes.	Questionnaire demographic and WHOQOL-brief	The highest score was the social domain (70, 42) and the smallest was the physical domain (49, 46).
LILACS	Zúñga et al., 2009	Chile	Cross	Kidney patients in HD	KDQOL-36. Scale of Karnofsky.	The physical and mental ranges and subscales of the symptoms, effect and load of the subscales the renal disease obtained scores below 50 in 80%, 61%, 8%, 43% e 80% of the evaluations, respectively.
LILACS	Santos et al., 2008	Brazil	Cross	Kidney patients in HD	SF-36	Among the eight areas of QVRS, the physical role presented the lowest score (35,0 ± 43,0) and social function the largest (64,3 ± 27,7). In multivariate analysis, age was associated with seven of the eight domains.
BDENF	Kusumoto et al., 2008	Brazil	Sectional	Adults and elderly people in HD	KDQOL-SF	Dimensions: Physical functioning, physical function, and overload of renal disease, all items had smaller medium scores for the elderly. Dimensions: Emotional function and stimulus on the part of the dialysis team, the elderly had the average scores larger than adults.
INDEX PSI	Rudnick et al., 2007	Brazil	Cross	168 HD patients with a minimum age of 19 and maximum of 82	Questionnaire demographic and social, Social Support Scale; Quality of life index and stressors related to the treatment of HD.	Multiple regression analysis showed association between stressors and HD treatment. Social support, with regard to the size of the network and the level of satisfaction with the perceived support, is related to the index of QV in the dimensions satisfaction and importance.
BDENF	Romão et al., 2006	Brazil	Analytical with cross-outline	50 Patients with an average age of 37 years, average of 50.6 months of treatment	SF-36, Karnofsky scale, cognitive Depression index	The dimensions of the SF36 most affected were: general state of health, vitality and mental health, however, all dimensions presented medium scores, lower than the general population.
	Castro et al., 2003	Brazil	Interview	184 patients	SF-36	The dimensions with the smallest values obtained were physical aspects and vitality.

O Instrument most used by the studies found was the Kidney Disease and Quality of Life - Short Form (KDQOL-SF), of the five articles that used this instrument, one used the KDQOL-36, an abbreviated version KDQOL-SF with 36 items to evaluate the quality of life in patients who do dialysis, which reduces interview time and improves acceptance (Gorodetskaya *et al.*, 2005). The generic component KDQOL-36 (itens 1-12) é o SF-12, That allows for two global scores: the summary of the physical components (PCS) and mental summary of components (MSC). The specific component of the KDQOL-36 (itens 13 a 36) To find the scores of the specific load subscales; symptoms / problems and effects of renal disease (Hoffmeister, 2007). Only three articles (SANTOS *et al.*, 2008; Romão *et al.*, 2006; Castro *et al.*, 2003) Used The validated Brazilian version of the health Research questionnaire in a short form of 36 itens do Medical Outcomes Study (SF-36) to measure the level of health-related life quality, with physical, psychological and social functioning issues that generate scores of 0 (worse) and 100 (better) in relation to 8 domains: physical function, physical functioning, bodily pain, general state of health, vitality, social function, emotional role and mental health (Santos *et al.*, 2008).

In relation to the generic dimensions studied, the physical function (Santos *et al.*, 2014; Cavalcante *et al.*, 2013; Braga *et al.*, 2011; Kusumoto *et al.*, 2008), followed by physical operation (Braga *et al.*, 2011; Kusumoto *et al.*, 2008), general health (Cavalcante *et al.*, 2013; Braga *et al.*, 2011), were the domains that presented lower scores, emphasizing the physical function and physical functioning that presented smaller scores for the elderly in an article (Kusumoto *et al.*, 2008) compared the quality of life between adults and seniors in HD. For the specific dimensions the smallest scores found were professional paper (Santos *et al.*, 2014; Cavalcante *et al.*, 2013; Braga *et al.*, 2011), kidney disease overload (Cavalcante *et al.*, 2013; Braga *et al.*, 2011; Kusumoto *et al.*, 2008), patient satisfaction (Cavalcante *et al.*, 2013; Braga *et al.*, 2011). The study that compared elderly and adults in Hemodialysis identified that the elderly presented lower score for renal disease overload, or worse quality of life for this domain. Just one article (Santos *et al.*, 2014) mentioned about the stimulus dimension on the part of the dialysis team with very high score, followed by social function and social support. The study (Kusumoto *et al.*, 2008) by comparing the elderly population with the adult, it showed that for the differentials emotional function and stimulation on the part of the dialysis team, the elderly presented higher scores, that is, better quality of life for this item.

## DISCUSSIONS

This integrative review based on the data collected, tried to reflect on the quality of life of patients with IRC on hemodialysis. The measure of the quality of life of dialysis patients in most studies it was carried out through the KDQOL-36, this result is justified by the fact that the instrument Be specific for gauging the quality of life in dialysis patients, in addition to being culturally adapted to Brazil (Duarte *et al.*, 2003, Cavalcante, 2013). The questionnaire is composed of 80 items and constitutes a generic instrument (SF-36), more 43 specific items for chronic renal disease (Kalantar *et al.*, 2006). Their results are evaluated through 19 scales, where 11 are specific to TCRI (list of symptoms/problems, effects of renal disease, professional role,

cognitive function, quality of social interaction, sexual function, sleep, social support, stimulation by the dialysis team and patient satisfaction) and eight related to the SF-36 (physical function, physical aspect, pain, general health, emotional wellbeing, emotional aspects, social aspects and energy/fatigue) (Lopes *et al.*, 2007). According to the recommendations of the KDQOL Working Group, the answers of the questionnaire Were converted to scores ranging from 0 to 100 points, where higher scores mean better patient quality of life (Hays *et al.*, 1994).

The Measure of the quality of life of dialysis patients with the KDQOL-36 showed health scores like this and mental below the referencial score reported to the Chilean general population. Considerably smaller scores were observed in the subgroups of patients with diabetes, coronary artery disease, Hypoalbuminemia, creatininemia below 9,4 mg / dL, age 55 years and with low socioeconomic levels and educational (Zuniga *et al.*, 2009). Considering thes physical functioning dimensions, physical function and renal disease overload is interrelated. The fall of these dimensions it relates to the regular complaints of malaise and fatigue presented by patients with chronic renal failure in hemodialysis (Kusumoto *et al.*, 2008). Just like, the physical aspect, vitality and general health it was the areas that presented the lowest scores in these studies, where in only one domain (Santos *et al.*, 2008; Takemoto *et al.*, 2011; Santos *et al.*, 2014) was mentioned higher score for social function. These results call attention to a good individual perception of the quality of life of elderly patients, which suggests an advanced stage of adaptation to pathology and that the treatment exerts little negative interference in of these patients in society (family, friends and neighbors). Specific questions for the chronic renal disease the high Stimulation score for the dialysis team, shows the satisfaction of patients with the support of the profusion team.

On the other hand, the low score for professional paper is justified, especially at the time spent on treatment, where often time is a factor that can limit the patient in continuing employed or the insertion into the job market, for those who aspire to work (Santos *et al.*, 2014). Only three articles (Santos *et al.*, 2008; Romão *et al.*, 2006; Castro *et al.*, 2003) used the validated Brazilian version of the Health research questionnaire short form of 36 Items to do Medical Outcomes Study (SF-36) to measure the level of health-related life quality, with questions related to physical, psychological and social functioning that generates scores of 0 (worse) to 100 (better) in relation to 8 domains: physical function, physical functioning, bodily pain, general state of health, vitality, social function, emotional role and mental health (Santos *et al.*, 2008). The studies used information from the abbreviated Quality of Life questionnaire to obtain socio-demographic data, evidenced that men presented a better quality of life in relation to women (Santos *et al.*, 2014; Braga *et al.*, 2011). Not that it concerns the age, it has been identified that with the advancing age the quality of life decreases, as well as, the higher the presence of comorbidities, the worse the quality of life of the chronic renal patient in hemodialysis (Santos *et al.*, 2014; Braga *et al.*, 2011; Kusumoto *et al.*, 2008). The presence of comorbidity, determininig factor in the quality of life, is associated with diseases chronics, patients with this type of disease need therapeutic lifelong care (Castro, 2003). The article that compared a test group with a control group, found that counseling to the patient seemed to exert an import role

in increasing the QL, modifying your psychological and start them for spirituality (Suja *et al.*, 2012).

### End Considerations

Through this study it was possible to observe that the quality of life is a recent theme, starting in Brazil in 2003. The quality of life it is something that is growing on the rise because it is an important domain directly related to the impact caused by chronic renal pathology in patients in use of hemodialysis therapy, has been presenting alarming increase in the index of patients who need this renal substitutive therapy. In its entirety, it was identified that a quality of life was impaired, as a result of complexity of therapy and adaptation to the new lifestyle, with restrictions imposed by her, be hydro, food, physical, social, emotional or professional. To measure the damage caused in the quality of life of individuals who make use of hemodialysis therapy are used questionnaires as KDQOL-SF, SF-36, WHO-BREF that make it possible to reliably assess the aspects more affected in the quality of life of the patient. It was alarming the impact of predictors health aspects in general and physical compared to individuals who did not use hemodialysis therapy. Other scores like professional paper, the satisfaction of the patient in relation to therapy, the overload of renal pathology, emotional issues, mental factor, influence in accession or rejection of proposed therapy. The need for research development what emphasize procedures what facilitate quality of life of patients that make use of therapy kidney substitutive. The nurse as a member of the multiprofessional team plays a key role in supporting patients in renal therapy serving of link between the other professionals. But it is expected that this work can provide subsidies, for an effective professional sensitisation in the daily stimulus of patients with the intuition of provide them a better quality of life.

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