Analysis of the Concept of Self-Control of Health for Patients Undergoing Hemodialysis

REVIEW

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Abstract

Objective: to analyze the concept of self-control of health in the context of hemodialysis.

Methods: a concept analysis was carried out based on the Walker and Avant reference in the period of february-march 2014 in the databases Scopus, Cinahl, Pubmed, LILACS and Cochrane.

Results: the elaborated concept was: decision-making necessary to achieve goals for compliance with the therapeutic complex and agreement made with health professionals. Attributes: compliance with the therapeutic complex, decision-making, partnership/agreement between patient and professionals, reach goals.

Conclusion: the concept analyzed is extensive and involves individual aspects of the patient, the therapy and the relationship between patients and professionals, with required good relationship between them so that one can achieve a goal that is shared by both of them: the pre-established target for treatment. Thus, with this knowledge, nurses can develop specific care strategies for this clientele.

Introduction

In hemodialysis, individuals with kidney disease experience changes in their roles, social interaction and personal satisfaction, compromising their independence and autonomy. These factors cause restrictions and damages to the physical, mental, functional aspects and to

the well-being [1]. In this context, kidney patients have to face a number of limitations, requiring adjustments to several changes [2].

Thus, these changes caused by the disease and the treatment interfere with the establishment of measures for self-care of patients. This fact is of concern for nursing care because part of the treatment is done autonomously by patients, through the proper use of prescribed medications, compliance with water and food restrictions and attendance to hemodialysis sessions [3].

It is noteworthy, therefore, the importance of understanding the concept of self-control of health in patients undergoing hemodialysis, to make it more specific in this clientele. This will contribute to the a more scientifically supported nursing care for renal patients, as well as interventions targeted to the needs of each individual.

Ineffective self-control of health reflects the difficulties experienced by patients undergoing a treatment regimen. This belongs to the health promotion domain and the health control class of the taxonomy II of Nanda International. It consists of five defining characteristics and 16 factors listed in this classification [4].

In this sense, concept analysis is a method that allows for the construction of conceptual definitions and accurate empirical references for use in theory and practice; clarification of terms in nursing; development of tools; and standardization of the professional language [5].

Given the above, the following questions was raised: What is the concept of self-control of health for patients undergoing hemodialysis described in literature? What are the attributes, antecedents and consequences of the concept of self-control of health in individuals undergoing hemodialysis? To answer these questions, the study set the objective: to analyze the concept of self-control of health in the context of hemodialysis.

Methods

The methodological theoretical framework used was the concept analysis proposed by Walker and Avant (2010) [5]. Thus, the concept analyzed was self-control of health in patients undergoing hemodialysis. To operationalize this analysis, an integrative literature review was carried out according to Whittemore and Knafl (2005) [6].

Thus, the following questions were set for the integrative review: What is the definition of self-control of health in subjects undergoing hemodialysis? What are the antecedents and consequences of the self-control of health in individuals undergoing hemodialysis?

The search was carried out between the months of february and march 2014, using controlled descriptors: *self-management, adherence* and *hemodialysis,* with the following intersections: *self-management AND hemodialysis and adherence and hemodialysis.* The Boolean "AND" operator was used. The two intersections were performed in order to identify the largest possible number of articles. The searched databases were: Scopus, Cinahl (*Cumulative Index to Nursing and Allied Health Literature*) Pubmed (*Library of Medicine and the National Institutes of Health Nattional*), LILACS (Latin American and Caribbean Health Sciences Literature) and Cochrane.

Inclusion criteria were: articles published in the last 5 years; articles available in full-length for free in the selected databases; articles available in the languages Portuguese, English or Spanish; and articles that address the concept, the antecedents and consequences of self-control of health. As exclusion criteria, were adopted: editorials, letters to the editor, theses and dissertations. It is noteworthy that the inclusion of the criterion papers available in full-length on the selected databases in the last five years was an strategy recommended by NANDA International [4].

For the selection of studies, the title was read and if this were not enlightening, the summary would

Table 1. Selection of articles in the databases Cinahl, LILACS, Cochrane, Pubmed and Scopus according to intersections. Natal-RN, 2014.

Intersection	Cinahl	LILACS	Cochrane	Pubmed	Scopus	Total
Self-management and Hemodialysis	24	0	0	5786	534	6344
Adherence and Hemodialysis	150	26	70	5962	4233	10441
Total selected	19	9	0	18	30	76

be read. And if still, the objectives of the analysis were not clear, the reading of the full text would be carried out. From the intersection of the descriptors in each database and the application of inclusion and exclusion criteria, the sample was obtained as shown in **Table 1**.

In the sequence, the concept analysis was carried out based on the model proposed by Walker and Avant [4]. This consists of eight stages, namely: 1 - concept selection, 2 - determining the objectives of the conceptual analysis, 3 - identification of possible uses of the concept, 4 - determination of the critical or essential factors, 5 - identification of a case model, 6 - identification of additional cases, 7 - identification of the antecedents and consequences and 8 - definition of empirical references. In this study, the steps performed were: 1, 2, 4, 5 and 7.

The selected concept was "self-control of health" in the context of patients undergoing hemodialysis. The choice of concept was motivated by the importance of understanding this phenomenon for nursing, in order to achieve maximum knowledge on the theme. The objective of the conceptual analysis was to identify the knowledge present in the literature about the attributes, antecedents and consequences of the concept.

As the attributes were identified, the antecedents and consequences of the concept of self-control of health in patients undergoing hemodialysis were observed. These were factors influencing the occurrence of the concept or occurring as a result of the concept. According to the model, the antecedents are the events or incidents that precede the occurrence of the concept. And the consequences are the events or incidents that result from the oc-

currence of the concept [5]. Data were organized in a table and analyzed according to literature relevant to the topic.

Results

The 76 articles selected for analysis were published mainly between the years 2013 and 2012 (55.3%), followed by the period 2011-2010 (36.8%) and more recently, in 2014, with less publications (7.9%). Regarding the language, English predomiated (81.6%), followed by Spanish (14.5%) and finally Portuguese (3.9%). With regard to the place of publication, 44.7% of the works came from America, 22.4% from Europe, 22.4% from Asia, 6.6% had no information on the place of publication, 1.3% from Africa, 1.3% from Oceania and 1.3% from more than one location, thus multicentric.

After reading the selected articles in the review, the identification of the critical factors, antecedents and consequences of the concept of self-control of health in patients undergoing hemodialysis was possible. These aspects are shown in **Table 2**, according to the frequency.

Table 2. Presentation of critical attributes, antecedents and consequences of the concept of self-control of health. Natal-RN, 2014.

Elements	Title	Frequency
Attributes	Compliance with therapeutic complex	15
	Decision-making	9
	Partnership/agreement between patient and professionals	5
	Achieving goals	2

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Elements	Title	Frequency
Antecedents	Compliance with the therapeutic regimen	20
	Sociodemographic factors	20
	Psychological state	19
	Motivation	15
	Treatrment adherence	13
	Social support network	10
	Symptomatology of the disease	1
Consequences	Improved quality of life	21
	Reduction of signs and symptoms	16
	Improved self-esteem	10
	Improvement of laboratory tests	9
	Appropriate follow-up of the treatment	3
	Facilitated the removal of fluids during hemodialysis	1

Following the identification of these three groups of components in the literature, and adding attributes, the concept proposed for self-control of health in the context of hemodialysis was defined as "decision-making necessary to achieve goals for compliance with the therapeutic complex and agreement made with health professionals."

In the sequence, a case model on the concept of self-control of health following is presented.

Mrs. A. M. B., 46, female, married, mother of one child. She has support and help from the family to do her treatment. She affirms to comply with the treatment regimen, and as an important factor for this, she has a good relationship with health professionals, and thus she achieves the set goals. Diabetic. She was diagnosed with chronic kidney disease four years ago and she has been undergoing hemodialysis treatment for 1 year. She keeps the dietary recommendations for sodium and fluid restriction properly and makes use of prescri-

bed medications. She attends dialysis sessions with regularity. She does not smoke or drink alcohol. In the last 12 months she needed the emergency service once and hospitalization was not necessary. With this, a proper follow up of the treatment is observed, and this has contributed to a better quality of life, improved laboratory tests and self-esteem.

Discussion

Given the above, we can see a steady increase in relation to the development of research on self-control of health because most of the studies found in the literature review were published in the years 2012 and 2014. English was the most common language of publication, reflecting the consolidation of this language as universal. However, this finding may be related to the predominance of research carried out in the American continent, what may reflect a large number of patients with chronic renal failure undergoing hemodialysis treatment.

Among the attributes identified in the literature, we highlight the compliance with the therapeutic complex, decision-making, partnership/agreement between patient and professionals and the achievement of goals.

The decisions of any individual are influenced by the environment in which he lives, and this changes from the moment of diagnosis of renal disease and, consequently, with the initiation of treatment. In hemodialysis, the patient needs to incorporate the fulfillment of a therapeutic complex in his routine, which include treatment sessions such as individual planning, diet, adequate fluid intake and the use of medications [7]. In the meantime, the multidisciplinary health team must act along with the patient, assisting him in making decisions that will be positive to health.

As for decision-making, a study reports that the empowerment of patients concerning their disease and treatment is a facilitating factor for making

decisions when it comes to their treatment, by making them to play an active role in health activities [8]. Moreover, the level of autonomy and self-care of patients are best related to an education program. Thus, nurses should consider an education program geared to patients that will make them autonomous to make decisions favorable to their health.

In this context, patients should be active subjects in their treatment. Here stands out the importance of the dialogue between professional and patient for better effectiveness of the information provided, understanding and partnership [9].

With the partnership between professionals and patients, the implementation and achievement of goals relating to the treatment become easier. The active participation of patients in their health and disease process becomes visible [10].

As antecedents, were identified the compliance with the treatment regimen, sociodemographic factors, psychological status, motivation, adherence to treatment, social support network and symptoms of the disease.

The antecedent "compliance with the treatment regimen" involves several factors of the therapy, including: adherence to water and food restriction, regular attendance to dialysis sessions and appropriate use of medications [11].

Sociodemographic factors can also influence the self-control of health. These include: age, gender, income, and others. A research points that the concept of biopsychosocial care, involving the individual in their health care, must be employed [12].

The psychological state of renal patients undergoing hemodialysis is permeated by critical variables that may strongly influence the treatment and health maintenance. The main variables that may be associated with adherence to treatment regimen are depression and anxiety. One study reported that patients with lower levels of depression had higher quality of life and exhibited higher levels of adherence to treatment regimen [13].

In addition to the psychological state, another factor that precedes the self-control of health is motivation. An individual motivated expresses the desire for change and act according to new behaviors, developing strategies to engage with treatment. Dialysis patients were more adherent, accepting treatment with more ease, after the application of a motivational speech [14].

Another term identified as antecedent was therapeutic adherence, which occurs when the individual is willing to live the new life style in accordance with the disease and its treatment. This new condition of life, caused by kidney disease and hemodialysis, may cause the patient feelings of fear, anger, anxiety and hopelessness [15]. Thus, individualized care plans must be used in the care of these patients, in order to improve the behavior of compliance [13].

Another antecedent identified was the social support network, that supports the patient in the context faced, before all the changes experienced at work, in self-image and in self-concept. Thus, appropriate social relationships result in social support and are essential to help with the stress experienced by these patients [16].

The symptomatology of the disease is another notable factor for self-control of health because. When patients manifest symptoms related to the disease, these symptoms act as signals, making patients seek care in order to obtain clinical improvement [17].

The articles analyzed showed six consequences to the concept of self-control of health in patients undergoing hemodialysis, namely: improved quality of life, reduction of signs and symptoms, improved self-esteem, improvement of laboratory tests, appropriate follow-up of the treatment and easy removal of fluids during hemodialysis.

One study found a significant relationship between self-care and quality of life. Individuals with chronic kidney disease (CKD) undergoing hemodialysis that had better ability to self-care in relation

to the treatment and preservation of arteriovenous fistula presented better quality of life [18]. In this context, nursing should act in actions that seek self-care of patients, and consequently an improvement in the quality of life of the clientele.

It is known that when the chronic renal patient adheres to hemodialysis and water and dietary restrictions, signs and symptoms related to complications of CKD such as dyspnoea, loss of appetite, edema, headache, nausea, vomiting, hypertension, lethargy, physical fatigue and weight gain, are reduced [15]. In the interim, the nurse should intervene in health education, explaining about CKD, treatment options and the benefits and detriments related to the acceptance or rejection of the therapy.

Another consequence identified was improved self-esteem, as psychosocial factors exert a strong influence on the control of the treatment. Authors show that self-esteem is an important mediator of adherence, along with family support. Thus, the multidisciplinary team should pay attention to the social support provided to patients, reinforcing their support network and promoting their self-esteem [19].

A study showed that the results of laboratory tests are considered sensitive markers to measure the adherence to dietary restrictions of chronic renal patients undergoing hemodialysis [13]. The levels of sodium, phosphorus and potassium may serve as excellent markers for patients undergoing dialysis, reflecting the appropriate follow-up or not of the treatment regimen [20]. Therefore, nurses should actively educate patients reinforcing the importance of following all aspects of the therapy, especially nutrition.

It is also important the consequent appropriate follow-up of the treatment. Chronic renal customers who understand the importance of treatment to maintain their life adhere to treatment, incorporating it into their daily lives, considering the guidelines of the multidisciplinary team and avoiding skipping treatment sessions [20].

The appropriate fluid and sodium intake can improve the removal of liquids during dialysis. This habit is influenced by psychological and social factors and knowledge [21]. Thus, the nursing team should promote actions that aid in the proper fluid intake, using tools that promote knowledge about CKD and its treatment.

Thus, we can see that the concept reviewed in the literature, manely, the self-control of health, was defined as: decision-making necessary to achieve goals for compliance with therapeutic complex and agreement established with health professionals. This concept has a history related to the psychological, social, physiological and therapeutic aspect with evident participation in the health control process of the patient, as the network of social support and health professionals. And as consequences of the concept are the improvement of psychological, physiological and therapeutic aspects.

The concept identified for self-control of health in the context of hemodialysis expresses the response of the individual toward his own health, seeking to fulfill the therapeutic regimen that covers all aspects of treatment and should not be considered in isolation. These aspects include the maintenance of the controled diet, adequate fluid intake, regular attendance to dialysis sessions, proper use of medications and attending medical appointments [7,11].

Moreover, there is the relationship established with health professionals, in which clarification and guidance are performed. This enables the understanding of the disease and of the treatment and thus facilitates the achievement of goals that are positive to health [10].

As for the identification of the model case, it is possible to clearly understand the elements of the concept, as well as their antecedents and consequences [5]. Thus, the above case shows that the practical visualization of the components of the concept is possible, highlighting the attributes "compliance with therapeutic complex", "patient-professional partnership" and "achievement of goals". As an-

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tecedents, were identified: social support network, compliance with the therapeutic regimen. And as consequences, were identified: appropriate follow-up of the treatment, improved quality of life, improved laboratory tests and self-esteem.

Therefore, with this, the nurse will appreciate clearly the components of the diagnostic Ineffective Self-control of Health, which allows for ease in the decision-making in face of inference of this nursing diagnosis. Consequently, an adequate action plan can be offered to the health of the patient undergoing hemodialysis.

Conclusion

The concept of self-control of health for kidney patients undergoing hemodialysis identified from the literature survey was "decision-making necessary to achieve goals for compliance with the therapeutic complex and agreement made with health professionals." Attributes: compliance with the therapeutic complex, decision-making, partnership/agreement between patient and professionals, reach goals.

Given the above, it is clear that the self-control of health for patients undergoing hemodialysis is related to the therapeutic regimen, requiring the patient and also the health professional to maintain a good relationship so that one can achieve a goal that is shared by both, that is, the pre-established goal to the treatment.

Thus, based on the concept of self-control of health as well as its antecedents and consequences, nurses can develop care strategies geared to the specific needs of customers. Thus, the information obtained in the present study will serve as support for definition and improvement of interventions focused on self-control of health of patients, as well as will provide a basis for assessing the health of these individuals.

Noteworthy, it is also important to carry out further studies in order to build operational definitions for the antecedents of the concept, in order to identify it evenly in the clinical practice.

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