Adherence: A concept analysis

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Abstract

**Purpose:** The purpose of this paper is to clarify the concept of adherence which is related to the quality of life, particularly in patients with Chronic Kidney Disease (CKD).

**Methods:** Walker and Avant’s (2005) concept analysis approach was used in this paper. Supporting articles for this paper were retrieved from Proquest and CINAHL accessed from the University’s library website. Related articles included in this study were published from 2007 to 2010. Also, information relating to adherence was included from 1 dictionary, 1 textbook, and 3 pages of a related website. Secondly, the differences between adherence, compliance and concordance were identified. Several attributes and cases were identified to clarify the concept of adherence.

**Results:** Results of this concept analysis showed that adherence related to the quality of life is a complex concept. It involves both physical, psychological, and any aspects, inside or outside of human beings. However, nowadays, the term adherence is more appropriate to be used in relation to quality of life of patients with CKD.

**Conclusion:** This paper has clarified this concept regarding differences adherence with other terms, including compliance and concordance, and also offers defining attributes; adherence treatments or recommendations, the gains and benefits of adherence felt, realization and acceptance of the current condition, and ability to perform daily activities as far as they can. Model, borderline and contrary cases were given in order to make this concept clearer. Antecedent, consequence and empirical referents have been explained. These are useful but still need to be explored further and most importantly, it should not only be part of academic writing, but should be developed in the context of improving nursing practice.

**Keywords:** adherence; concept analysis; Chronic Kidney disease; quality of life

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Introduction

Patients with Chronic Kidney Disease (CKD) have multi-organ dysfunctions. Increasing the amount of uremic and other metabolic products causes decreasing body functions and enhances the emergence of disease in many systems such as pleuritis and pulmonary edema in the respiratory system, uremic fetor and itching on skin, and pericarditis in the cardiovascular system (Ignatavicius & Workman, 2006). These will weaken the body and decrease its ability to perform the daily activities of living.

One of the ways to reduce the amount of uremic and other metabolic products in a patient’s body is by undergoing hemodialysis. It is a procedure to filter out these toxic products. This procedure can help patients live for many years as well as helping patients to increase their ability to do activities. Increasing their ability also encourages an increase of their quality of life. The other way to reduce metabolic products and enhance a patient’s quality of life is to adhere to a low-protein diet and to restrict fluid intake. These ways need the patients’ adherence in order to achieve the highest level of their quality of life that they can achieve. Nowadays, adherence is a popular term for patients to show they are following advice from a healthcare giver. There are many terms used interchangeably with adherence, such as compliance and concordance. However, these need to be clarified in terms of differences and how the concept of adherence is applied in CKD case.

Purpose

The purpose of this paper is to clarify the concept of adherence which is related to the quality of life, particularly in patients with Chronic Kidney Disease.

Method

Walker and Avant’s (2005) concept analysis approach was used in this paper. Supporting articles for this paper were retrieved from Proquest and CINAHL accessed from the University’s library website. Related articles included in this study were published from 2007 to 2010. Also, information relating to adherence was included from 1 dictionary, 1 textbook, and 3 pages of a related website. Secondly, the differences between adherence, compliance and concordance were identified. Several attributes and cases were identified to clarify the concept of adherence.

Results

Walker and Avant’s (2005) concept analysis comprises definition, related concepts, defining attributes, model case, borderline case, related case, contrary case, antecedents and consequences, and empirical referents. Use of the concept as follows:
Definition

Based on the Cambridge Learner’s Dictionary (Walter, 2004), adherence is “when someone obeys a set of rules or principles” (p.10). Sabate said that “adherence means more than just following instructions” (as cited in Kammerer, Garry, Hattrigar, Charter, & Erlich, 2007, p. 480). There are two other words that are closely related to adherence. They are compliance and concordance. Compliance is the most common term for following treatment instructions. It describes “the extent to which the patient’s behavior matches the health professional’s recommendations” (Haynes, et al, 1979, as cited in Kaufman & Birks, 2009, p. 54). The word compliance has been criticized for its negative connotations, in that it implies “a passive role for the patient and suggests an element of blame or recrimination for the individual who fails to comply with correct treatment instructions provided by an expert “(Horne et al, 2005, as cited in Kaufman & Birks, 2009, p. 54).

The term adherence has replaced compliance in accordance with the increased desire to emphasize the patient’s role in decision making. The emphasis in using the term adherence is on the patient’s freedom to decide whether or not to follow recommendations. The terms adherence or non-adherence describe the extent to which the patient’s behavior matches the agreed recommendations of the prescriber (Barofsky, 1978, as cited in Kaufman & Birks, 2009).

The term concordance, which describes a more patient-centred approach to prescribing and taking medicines, was therefore adopted. This term was originally defined as ‘a new approach to the prescribing and taking of medicines’ (Medicines Partnership, 2003, as cited in Kaufman & Birks, 2009, p.53). An agreement is reached after negotiation between a patient and a healthcare professional, which respects the beliefs and wishes of the patient when determining whether, when and how medicines are to be taken. From the definitions above, the term adherence is defined broader than the term compliance and concordance because it allows patients to use their rights and role to make a decision related to their life. It is not only about sticking to a program or recommendations from the prescriber, but also allows patients to think further about their life. Patient’s awareness of the importance of his or her life will encourage the patient to decide the best for his or her life.

Related concepts

Patients need to adhere to medication, treatments, or any recommendations, because this plays an important part in achieving quality of life as high as they able to do. Many studies have been conducted to analyze the adherence of patients (Bissonette, 2008; Davis, 2007; Enriquez, Cheng, McKinsey & Stanford, 2009; Kip, Ehlers, Wal & Phil, 2008; Matinez, Aguilar, Pacheco & Martinez, 2007; Miakowski, Shockey & Chlebowski, 2007; Ruppar, Conn & Russell, 2008; Williams, Manias & Walker, 2008) in particular patients with Chronic Kidney
Disease is a progressive, irreversible deterioration in renal function in which the body’s ability to maintain metabolic and fluid and electrolyte balance fails, resulting in uremia or azotemia (Ignatavicius & Workman, 2006). There are many factors influencing the adherence of patients, such as cognitive function (Hain, 2008), negative perceptions of illness related to their conditions (Kim & Evangelista, 2010), personal beliefs, and the need to exert some control over their life direction (Christensen, Wiebe, Edwards, Michels & Lawton, 1996; Karamanidou, Weinman & Horne, 2008; Welch & Thomas-Hawkins, 2005, as cited in Yokoyama et al, 2009). Therefore, clinical outcomes in patients with CKD may differ according to these factors and their degree of adherence to treatment.

The level of adherence depends ultimately on the adoption and maintenance of a range of therapeutic behaviors by both the healthcare giver and/or the patient that may include the patient’s self-management of biological, behavioral, and social factors that influence health and illness. The World Health Organization’s more recent efforts have focused on the modifiable variables of psychosocial factors; in particular, much attention is now focused on social support as an important psychosocial factor related to adherence in patients on hemodialysis (Kammerer et al., 2007). Social support is defined as support by social and interactional activities from sources such as family, friends, colleagues and medical staff (Kovac, Patel, Peterson & Kimmel, 2002 as cited in Yokoyama et al, 2009). Others researcher such as Martinez et al. (2008) identified an association between most quality of life domains and the combination of medical prescription knowledge and attitude toward treatment adherence in type 2 diabetic patients. They considered it important to explore psychological precursors of treatment adherence behavior in type 2 diabetic patients and to carry out interventions that change negative attitude toward treatment adherence and promote medical prescription knowledge, which may help to improve the quality of life of such patients. Those factors can be other concepts which are closely related to adherence and influence the achievement of a good quality of life in the patients with CKD. If patients adhere to treatments and recommendations given by a healthcare giver and the other factors which support them, they can achieve the highest level in their quality of life.

Quality of life is often regarded in terms of how it is negatively affected, on an individual level, a debilitating illness that is not life-threatening, a life-threatening illness that is not terminal, a terminal illness, the predictable, natural decline in the health of an elder, an unforeseen mental/physical decline of a loved one, and the chronic, end-stage disease processes (Wikipedia, 2010). Researchers at the University of Toronto’s Quality of Life Research Unit define quality of life as the degree to which a person enjoys the important possibilities of his or her life (Wikipedia, 2010). Quality of life in relation to adherence considers who one is, how one is connected to one’s environment, and whether one achieves one’s personal goals, hopes,
and aspirations. Many tools have been developed by researchers to measure it, such as Quality of Life Inventory (QOLI) by Frisch (1990) or WHO Quality of Life-BREF (WHOQOL-BREF) by WHO (2004). Frisch categorizes quality of life in terms of the areas of life including health, self-esteem, goals and values, money, work, play, learning, creativity, helping, love, friends, children, relatives, home, neighborhood, community (Frisch, 1990). The World Health Organization (WHO) WHOQOL-BREF instrument measures the following broad domains: physical health, psychological health, social relationships and environment (WHO, 2004).

**Defining attributes**

Determining the defining attributes is an effort to try to show the cluster of attributes that are most frequently associated with the concept and can be a list of characteristics of the concept that appear over and over again (Walker & Avant, 2005). Based on this approach, defining attributes of adherence are:

1. The ability to make decisions to adhere to all treatments, medication or recommendations based on their ability in terms of money, time, opportunity, and so on. Not all patients can get the treatments because of lack of money, time, or opportunity, but the most important factor is they should make a decision, and have willingness and an effort to adhere these.

2. Beneficial to the person who adheres to all treatments, medication or recommendations. They recognize and feel the benefits of adhering to medication, treatments, or other recommendations from their healthcare giver. For example, patients feel stronger after hemodialysis treatment or their edema is reduced after they restrict their fluid intake.

3. Acceptance of their condition. They do not deny or complain about their conditions.

4. The ability to perform daily activities as far as the patient is able to. It means that if they do anything that they should do as well as what people usually do in the same setting, based on their ability.

**Model case**

A model case is an example of the uses of the concept that demonstrates all the defining attributes of said concept, these can be from real life experiences, found in literature, or self constructed (Walker & Avant, 2005). The model case appears below:

*Paul, a 65 year-old man has been suffering from CKD since five years ago. He was asked by his doctor to undergo hemodialysis three times a week, and restrict his fluid intake to only 900 ml/24 hours and eat a low-protein food. He comes to hospital for hemodialysis treatment three times a week based on a schedule, he restricts his fluid intake, and also asks his wife to cook low-protein food for him*
and also remind him if he forgets to adhere to these recommendations. He feels stronger and satisfied after adhering to these conditions. His edema is less than before. Day after day he realizes about his current condition with its many limitations, but he can accept it as part of his life. Even though he has been suffering from CKD, he still works everyday as a government officer. He always tries to do everything independently. He almost never asks for help from his wife or his children unless he really cannot do something. He said that he will do his best until he dies. His wife and his children always support him. They are proud of him.

All of the attributes are noted in this case. This case shows how adherence has a positive influence on the quality of life of this person. Adherence to the treatments or recommendations from the healthcare giver is important to achieve the highest level of quality of life that can possibly be achieved by the person.

Borderline case

A borderline case is an example or instance that contains most of the defining attributes of the concept being examined but not all of them (Walker & Avant, 2005). A borderline case of this concept as follows:

Jean, a 40 year-old woman routinely undergoes hemodialysis three times a week as scheduled, adhering to any advice from her doctor and nurse. She feels benefits from hemodialysis treatment and the other recommendations. Her edema has decreased, and the amount of uremic products in her blood has also decreased. However, she cannot accept her condition. She is in denial about her current condition. Jean thinks she will be a useless woman. She sometimes does not believe that she has got this illness. Her husband died 10 years ago and her children are still young. They need love from her. She works to get money for her treatment and for her children. She goes to work in the morning and back in afternoon. She works everyday as a Human Resources Department manager in a private company. She also cooks food in the morning for her children, helps them to finish their homework, and performs other household work. She is committed to serve and love her children as far as she can.

This case shows that one of the defining attributes, realization and acceptance of her condition, was not included. The woman made a decision to adhere to treatment or recommendations, she gained and felt the benefits of her treatment, and fulfilled her job as a single parent, but actually she could not accept her current condition. However, her love to her children gave her spirit to do her duty as a mother and also as a father at the same time.
A nurse found Cheryl, a 45 years-old woman lying unconscious on the floor in front of a restroom hospital. The nurse immediately asked other nurses to take her to the emergency room. Based on the result of physical and diagnostic examinations, Cheryl had to undergo hemodialysis due to Chronic Kidney Disease. After hemodialysis, she felt better and the nurses asked her to restrict her fluid intake and eat a low-protein food. She went back home and has tried to understand her current condition due to her illness. Her husband also tries to help her to realize and recognize her condition. He also gives her support to adhere to any treatments and recommendations from the nurses. She realized and finally recognized her current condition. She followed all of the recommendations given by the nurses. She finally understood and could accept her current condition due to her illness.

This case shows that what the woman did related to the concept in some way, but differs from it. This case started from incidental events that might not have been predicted before, however Cheryl made a decision to adhere to the defining attributes of the concept. She finally understood and adhered to all treatments after she recognized her current condition.

Contrary case

According to Walker & Avant (2005), contrary cases are clear examples of not the concept. It means that a contrary case doesn’t meet all of the defining attributes. For example:

Gordon has been suffering from CKD since 1 year ago. But he doesn’t adhere to treatments or recommendations from his healthcare giver. Sometimes he come to the hospital for hemodialysis treatment, but almost never fits the treatment into his schedule. Nurses ask him to restrict his fluid intake. He is allowed to drink up to 900 ml/24 hours, but he almost drinks 2000 ml/24 hours everyday. Nurses also ask him to reduce his intake of high-protein food, but he eats high-protein food everyday. That’s why he cannot feel and gain the benefits of adherence, because he doesn’t adhere to the recommendations. He cannot accept his condition. Sometimes he doesn’t believe that his feet and abdomen are bigger than before due to the edema of his illness. He resigned from his job as a teacher and now he just stays at home. Everyday his activities are just sleeping, eating and watching television. He is often angry to his wife and his children as one of his responses to his lack of ability. Sometimes he cannot control himself, and his wife and his children have to be patient faced with his behavior.

This case shows that none of the defining attributes are included in it. This is in contrast with the model case where all of the defining attributes are included. A contrary case helps us to understand how the importance of defining attributes in this concept is related to the quality of life.
Antecedents and consequences

Antecedents are those events or incidents that must occur prior to the occurrence of the concept (Walker & Avant, 2005). Based on this definition, antecedent of this concept is the occurrence of Chronic Kidney Disease in a person that can be caused by many factors, such as kidney stones, infections in the kidney, ureter or uretra stricture, or Benign Prostate Hyperplasia (BPH). Those play an important rule on the starting occurrence of the concept.

Consequences are those events or incidents that occur as a result of the occurrence of the concept, in other words, the outcomes of the concept (Walker & Avant, 2005). The consequence in this concept is that he or she will achieve the highest level of quality of life. It will make his or her life become more meaningful, even though he or she suffers from the disease.

Empirical referents

Walker and Avant (2005) define empirical referents as classes or categories of actual phenomena that by their existence or presence demonstrate the occurrence of the concept itself. There are instruments for measuring the concept, such as the Quality of Life Inventory (QOLI) created by Frisch (1990), or WHO Quality of Life-BREF (WHOQOL-BREF) from WHO (2004). Frisch’s tool assesses life satisfaction and outcome based on areas of life including health, self-esteem, goals and values, money, work, play, learning, creativity, helping, love, friends, children, relatives, home, neighborhood, community (Frisch, 1990). The WHOQOL-BREF instrument measures the following broad domains: physical health, psychological health, social relationships, and environment (WHO, 2004). Empirical referents from this concept include the occurrence of adherence of treatments or recommendations, and any indicators to measure the concept that is offered by those tools above.

Conclusion

Adherence related to the quality of life is a complex concept. It involves both physical, psychological, and any aspects, inside or outside of human beings. However, nowadays, the term adherence is more appropriate to be used in relation to quality of life of patients with CKD. This paper has clarified this concept regarding differences adherence with other terms, including compliance and concordance. These concepts should not only be part of academic writing, but should be developed in the context of improving nursing practice.
Implications

In delivering nursing care for patients, especially CKD patients, nurses need to realize patients’ right and roles in their life. Since adherence closely related to use of right and role of patients, nurses should give adequate information to their patients about the treatments given to the patients, so that the patients can fully understand benefits of the treatments and they will decide to adhere the treatments. Nurses play important roles in helping their patients using their roles and right appropriately related to their treatments.

References


