

Compensatory Health beliefs and its relationship with the attitudes towards health behavior among chronic renal insufficiency

المعتقدات الصحية التعويضية وعلاقتها بالاتجاه نحو السلوك الصحي لدى مرضى القصور الكلوي المزمن

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Abstract:

This study was conducted in patients with chronic renal insufficiency who were hospitalized at the Ghardaia state level. The research sample consisted of 30 patients (17 men and 13 women). The aim of the study was to identify the relationship between compensatory health beliefs and the trend towards healthy behavior in chronic renal insufficiency patients. The study used: a measure of the compensatory health beliefs of Dagestani and Mufti and a measure of the trend towards healthy behavior of Zaatout Ramadan. The results obtained that chronic renal insufficiency patients have healthy compensatory beliefs, and a negative trend towards healthy behavior, whereas; there was no correlation between health beliefs and a trend towards healthy behavior for the study sample.

Keywords: compensatory health beliefs; trend towards healthy behavior; chronic renal insufficiency.

ملخص:

أجريت هذه الدراسة على المرضى المصابين بمرض القصور الكلوي المزمن الذين تواجدوا على مستوى المستشفى ولاية غرداية، وتكونت عينة البحث من 30 مريض مريضة (17 رجل و13 امرأة). وهدفت الدراسة الى التعرف على العلاقة بين المعتقدات الصحية التعويضية والاتجاه نحو السلوك الصحي لدى مرضى القصور الكلوي المزمن. استخدمت الدراسة المنهج الوصفي، واعتمدت على الأدوات التالية: مقياس المعتقدات الصحية التعويضية لسناء عيسى الداغستاني وديار عوني المفتي ومقياس الاتجاه نحو السلوك الصحي لزعطوط رمضان، كما استخدمت الأساليب الإحصائية المناسبة لطبيعة التساؤلات والفرضيات. ومن خلال النتائج المتحصل عليها توصلت الدراسة الى أن مرضى

القصور الكلوي المزمن لديهم معتقدات تعويضية صحية عالية، واتجاه سلبي نحو السلوك الصحي، كما تم نفي وجود علاقة بين المعتقدات الصحية التعويضية والاتجاه نحو السلوك الصحي بالنسبة لعينة الدراسة.

الكلمات المفتاحية: المعتقدات الصحية التعويضية؛ الاتجاه نحو السلوك الصحي؛ القصور الكلوي المزمن.

1. Introduction

The prevalence of chronic diseases has greatly increased of what the researchers expected, it even requires long-term and expensive treatment, this has caused physical, psychological and social problems. One of these diseases is chronic renal insufficiency. A patient with renal insufficiency changes his life radically and this effect shown in his behaviors. The style adopted by the patient which is influenced by his internal beliefs and convictions and how he adopts behaviors that are either healthy that alleviate the severity of the disease or unhealthy that contribute to the complexity of his condition. Especially since, he is subject to a filtering machine that may last a lifetime. Therefore, the researchers focused their attention on compensatory health beliefs, which are the beliefs that individuals make and are part of personal beliefs related to the consequences of negative behavior as compensation for it. These beliefs play an important role in the direction towards healthy behavior or not. Therefore, healthy behavior refers to every activity that an individual does to develop his health or sustain well-being, such as healthy food, sports activity, compliance with medical instructions and regular follow-up of liquidation classes, while staying away from risk factors and pathogenic behavior. Because the importance of health behavior is so great, it has made it the target of many theories and explanatory models trying to understand this behavior and its determinants, such as Bandura's social epistemology and Becker and colleagues ' health belief model.

2. Problematic Study :

Renal insufficiency is a disease that affects an important organ of the body, which is the kidney, the main organ in carrying out vital functions such as ridding the blood of its harmful impurities and maintaining the balance of the body. Any damage to the kidneys entails damage to the health of the individual as a whole. Renal insufficiency accounts for a high percentage of deaths in the world; and it is considered one of the diseases that influence the lifestyle of individuals, whether it is preventive or dangerous. Therefore, it should be noted that many countries have adopted projects aimed at changing health behavior at

the public level, such as the American health public project (Healthy people, 2015), which focused on building health-promoting behavior and reducing chronic diseases. Research and studies have provided us with, in particular, the health beliefs model, which considers human behavior as logically determined, considers health behavior as a function of individual selection processes based on self-calculations of benefits and costs, and assumes an interrelated predictability of health-related trends. The healthy beliefs model is one of the most explanatory models of why individuals tend to practice healthy behavior. (Souad, Khashab, 2011, p. 14) Which depends on two factors: the degree of threat perceived by a person who exposed to a health threat, and his awareness that these practices are effective in reducing the threat.

In the light of the above data, we can ask the following research questions:

- 1- Is there any relationship between health beliefs and the trend towards healthy behavior in patients with chronic renal insufficiency?
- 2- What is the level of compensatory health beliefs among patients with chronic renal insufficiency?
- 1- Are there any significant differences in the trend towards healthy behavior, in patients, with chronic renal insufficiency?

According to the above questions, we suggest the following hypotheses:

- 1- We expect that there is a relationship between compensatory health beliefs and the trend towards healthy behavior in patients with chronic renal insufficiency.
- 2- We expect that the level of compensatory health beliefs among patients with chronic renal failure is low.
- 3- There are significant differences in the trend towards healthy behavior, in patients, with insufficiency chronic renal failure.

3. Objectives of the Study: The present paper aims at the following objectives:

- Identification of health beliefs on a sample of patients with chronic renal insufficiency in the hospital of Ghardaia.
- Revealing the level of trend towards health behavior prevailing in the study sample.

- Identify the nature of the relationship between compensatory health beliefs and the trend towards health behavior among the sample members.

4. The importance of the study: The importance of this study is:

- To enrich researches and studies at the national and local levels that address health beliefs and health behaviors to improve our health and reduce the spread of chronic and dangerous diseases as chronic renal insufficiency.
- To highlight the importance of healthy beliefs and its relationship to health-related behaviors to maintain them.

5. Definition the basic concepts of the study

5.1. Health beliefs and compensatory health beliefs:

Creech Karetshifeld defined beliefs as: a stable organization of perceptions and knowledge about a certain aspect of an individual's life, or they are a semantic pattern of an individual's knowledge about a specific thing". (Mohammad Khalifa, 1998, p. 16)

Rosenstock and Becker (Becker and Rosenstock, 1974) defined health beliefs as those that an individual attributes to his beliefs, expectations and perceptions, which would help, maintain and improve health.

As for (Azjen, 2001), he defined health beliefs as the intention of individuals to perform a certain positive behavior that they do believing that it will accepted and that they will have control over.

Concerning to compensatory health beliefs, Rabieu Marjorie, knauper Barbel, who are the founding pioneers of the theory of compensatory health beliefs, they defined it as an individual's belief in his ability to change or modify an unhealthy voluntary behavior with another voluntary, healthy behavior during a certain time. (Souad, Khashab, 2011, p. 41)

5.2. Healthy behavior and the trend towards healthy behavior:

Healthy behavior is the behaviors that individuals perform with the aim of promoting and maintaining their health status. The importance of unhealthy

behaviors stems not only from the fact that they contribute to the occurrence of diseases, but also because they may simply develop into habits that are harmful to health. (Shelley Taylor, 2008, p. 109)

Health behavior, according to Sarafino, is defined also as: any activity practiced by an individual with the aim of preventing diseases and for the purpose of recognizing or diagnosing a disease in the early stages. (Bahloul Sarah Ashwaq, 2009, p. 30)

Stoetzel (1978) defined the trend towards healthy behavior as the way that an individual perceives things of value. (Zaatout & Qurishi, 2014, p. 282)

5.3. Chronic renal insufficiency :

The medical dictionary (Larousse Medical, 2002) defined renal insufficiency as a decrease in the ability of the kidneys to ensure filtration and economize blood expenses, as well as monitor the body's balance in terms of water and salts and regulate blood intensity.

Eveillant and Nolle (2001) defined also chronic renal insufficiency as: a gradual deterioration in kidney function and the final and irreversible breakdown of nephrons, as chronic renal insufficiency develops over a period of a month or years, and when it reaches the final stage, it becomes very deadly and resort to regular dialysis.

6. Methods and Materials

6.1. Research Design :

A descriptive approach was the most suitable for the present study; it describes the phenomenon to study it as in reality, which also aims to collect data on a number of variables, especially if there is a relationship between them. In addition to find the direction of that relationship, in this study we describe the nature of health beliefs and the trend towards health behavior in patients with chronic renal insufficiency, and then determine the correlation between health beliefs and the trend towards health behavior in the study sample.

This study was applied to 30 patients with chronic renal insufficiency, where the study sample was randomly selected from among the patients visiting the hospital and frequenting the filtering machine Center at the hospital level in

Ghardaia, and the research sample consisted of 30 patients (17 men and 13 women). Their age ranges from 24 years to 63 years.

Here are the characteristics of the sample:

Table1. The characteristics of the sample members and their distribution by gender

Sex	Repetition	Ratio
male	17	56.7%
feminine	13	43.3%
the total	30	100.0%

(Produced by the author)

Table2. The characteristics of the sample members and their distribution by age

Age	Repetition	Percentage
24 -48 years	08	26.7%
49 -53 years	05	16.6%
54 -58 years	11	36.7%
59 -63 years	06	20.0%
Total	30	100.0%

(Produced by the author)

6.2. Research Tools :

In order to carry out the present study, which was conducted renal clearance department at the hospital of Ghardaia between January 23, 2023 and March 20, 2023, we used two scales.

6.2.1. The compensatory health beliefs scale :

The compensatory health beliefs scale is one of the well-known scales in which researchers Sana Issa Dagestani and Diyar Awni Mufti conducted and prepared in their study in 2010.

Dagestani and Mufti measured the truthfulness of the scale using both the truthfulness of the arbitrators and the truthfulness of internal consistency and peripheral comparison. For the purpose of the present study, and to confirm the

authenticity of the scale of compensatory health beliefs, the peripheral comparison method and internal consistency were used, which amounted to 0.71 and this indicates the sincerity of the scale.

In order to measure the stability in accuracy and consistency in the degrees of the scale that is supposed to measure what needs to be measured. (Dagestani & Mufti, 2010, p. 118)

To measure the constancy the Cronbach's Alpha method of internal consistency was used, since the constancy of the compensatory health beliefs scale had a value of 0.81. It is a high stability value, which indicates that the statements are clear in the study sample.

Table3. The Cronbach's Alpha constancy coefficient for the compensatory health beliefs scale.

	Number of the Terms	Number of individuals	Stability coefficient
Compensatory Health Beliefs	30	30	0.81

(Produced by the author)

6.2.2. The trend towards healthy behavior scale

Zaatout Ramadan prepared this scale in 2005, which was adapted to the Algerian environment. The scale consists of 24 items. By using the terminal comparison, the truthfulness of the scale was confirmed, as the value of $T = 14$, which is a function at 0.01.

Table 4. The results of the terminal comparison of the scale of the trend towards healthy behavior

t-test scale	T test	Degree of freedom	indication
Measure of attitude toward healthy behavior	14	26	0.01

(Produced by the author)

To ensure the stability of the scale of the trend towards healthy behavior, the Cronbach's Alpha coefficient was used, which cleared the stability of the scale according to the following table:

Table 5. The stability of the measure of the trend towards healthy behavior Scale

Scale	Number items	Number of individuals	Consistency
Direction toward Healthy Behavior	24	30	0.93

(Produced by the author)

Through table number 5, we notice the high level of the coefficient of constancy of the measure of the trend towards healthy behavior. Which indicates the clarity of the phrases of the scale in the study sample.

7. Results and Analysis :

The data was collected and downloaded through the tools used in the study, mentioned above, and by using the Social Sciences Statistical package System program (SPSS.27), we can discuss the following results:

The current study included three hypotheses, the results presented, and discussed as below:

7.1. Discussion and analysis of the results of the first hypothesis:

Hypothesis 1: 'There is an associative relationship between health beliefs and the trend towards health behavior in patients with chronic renal insufficiency'.

In order to study this hypothesis, we used Pearson's correlation coefficient as below.

Table 6. The correlation coefficient between compensatory health beliefs and the trend towards health behavior in patients with chronic renal insufficiency.

Variables	Associative value	Sig value
Health beliefs	0.23	0.21

(Produced by the author)

It is clear from above table that there is no statistically significant relationship between compensatory health beliefs and the trend towards health behavior in

patients with chronic renal insufficiency. Therefore, we reject the first hypothesis and it can be argued that there is no statistically significant relationship between health beliefs and the trend towards healthy behavior in patients with chronic renal insufficiency.

From the results obtained, the hypothesis that there is an associative relationship between compensatory health beliefs and a tendency towards healthy behavior has not been realized. Accordingly, we accept the conclusion that there is no correlation between healthy beliefs and a tendency towards healthy behavior.

This result is consistent with a study of Lashhab and Ben Aisha that aimed at studying the relationship of compensatory health beliefs with health discipline behavior in patients with chronic renal failure, which concluded that there is no relationship between health beliefs and health discipline in patients with chronic renal failure (Lashhab & Ben Aisha, 2018). In that, they did not agree with a study of Rezki and Amezian, which concluded that there is a positive correlation between the belief of self-efficacy and adherence to blood filtering behavior in patients with chronic renal insufficiency. (Amazian & Rezki, 2018)

We can explain the absence of a relationship between compensatory health beliefs and the trend towards healthy behavior, among the sample members, by the fact that sometimes individuals do not tend to carry out healthy or preventive behavior, because they know of their good benefits to their health; but they are convinced that they have the ability to do so. Or by the presence of role models and role models in front of them with their similar situations and sufferings and were able to carry out healthy behavior and succeeded in achieving the desired results.

Other times, this is due to their lack of awareness of the danger caused by their lack of commitment to health practices on the one hand, and on the other hand, it may be due to a loss of self-motivation, and therefore succumbing to the disease and losing hope of survival or getting a full recovery....

It is also no secret to anyone that the exhausting nature of chronic renal failure disease and its impact touches all aspects of the patient's life, making some in a state of despair and helplessness. In addition, according to the model of healthy beliefs, the weighting of obstacles and costs at the expense of benefits, that is, their belief in failure to try to survive the disease makes the patient not inclined

to engage in compensatory health behaviors. That represents "deep convictions, firm and acquired principles that were formed by the first experiences in our life This perception is the program by which the world is understood and judged, through which man interprets events and anticipates actions, which are central and fundamental beliefs" (Dagestani & Mufti, 2010, p. 87).

We also point out that the result obtained in the initial hypothesis of the current study did not agree with the findings of some studies and similar samples of patients with chronic diseases. For example, the results of a study of Masoudi and Bashir, which concluded that there is a relationship between health beliefs and the trend towards health behavior for the study, sample. (Masoudi & Si Bashir, 2016)

The present study did not agree with the result of the study of Jihan Yahia Mahmoud. Which established a correlation between the healthy beliefs of the study sample and their healthy behavior. (Jihan Yahia Mahmoud, 2016) The result did not agree also, with what was said in the theoretical literature. Because it indicates that when an individual practices unhealthy behaviors, he will feel the presence of a certain health disorder, but he changes his behavior by doing some behaviors as compensation for unhealthy behavior, in order to raise his own ability to overcome and face that health problem.

7.2. Discussion and analysis of the results of the second hypothesis:

Hypothesis 2: We expect that the level of compensatory health beliefs among patients with chronic renal failure is low

To study this hypothesis, we use the Test (T) for one sample to study the significance of differences between the hypothetical average (50) and the arithmetic average to study the significance of differences in repetitions between levels of healthy beliefs; the following is a presentation of the results:

Table 7. (T) Test results for one sample to study in average health beliefs

Health beliefs	Sample	Hypothetical average	Arithmetic average	standard deviation	Calculated T value	Degree of freedom	Tabulated T value	Sig
	30	50	79	5.04	31.48	29	5.04	<0.001

(Produced by the author)

It is shown that there are statistically significant differences at the level of 0.01, as p is smaller than 0.05; therefore the differences between the hypothetical and arithmetic averages are statistically significant, and the value of (T) is ($T=31.48$) greater than ($T= 5.04$). Whereas, the sample mean ($M=79.00$) is also larger than the hypothetical average ($M= 50$). Therefore, the level of compensatory health beliefs among the study sample members is high.

This is consistent with Rosenstock's theory of compensatory health beliefs, which said that: 'a person follows preventive behaviors based on the comparisons he makes in calculating the benefits and harms as a result of his willingness to do healthy or unhealthy actions, neglecting his health and compensating for this with other alternative practices when he realizes the threat'. (Dagestani & Mufti, 2010)

The findings of the present study are consistent with the theoretical heritage of compensatory health beliefs regarding the perceived risk of a patient with renal insufficiency losing his life, if he does not comply with the blood filtration procedure. Therefore, the results emphasize the role of beliefs in patients with renal insufficiency in the nature of their understanding of their disease, which forces them to adhere to follow-up and liquidation quotas. This result agreed also with the study of (Chenstensenst ET Allen, 2000), which confirmed that compensatory health beliefs in patients with renal insufficiency determine the behavior of attending liquidation rations.

7.3. Discussion and analysis of the results of the third hypothesis:

Hypothesis 3: We expect that the trend towards healthy behavior in patients with chronic renal insufficiency will be negative.

To study this hypothesis, we use Test (T) for one sample to study the significance of differences between the hypothetical average (75) and the sample average (70) to study the significance of differences in repetitions between the levels of trend towards healthy behavior, the following is a presentation of the results:

Table 8. The results of the Test (T) for one sample to study the significance of differences in the trend towards behavior

The trend towards healthy behavior	Sample	Hypothetical average	arithmetic average	standard deviation	Calculated T value	Degree of freedom	Tabulated T value	Sig
	30	75	70.76	3.71	-6.24	29	3.71	0.001

(Produced by the author)

From table above, it is clear that the value of (T) test in the direction towards healthy behavior amounted to ($T=-6.24$) the differences are statistically significant because P is smaller than 0.05 and the value of (T) is ($T= -6.24$) and ($p<0.001$). The arithmetic mean ($M= 70.76$) and the hypothetical mean ($M=75$), in comparison, the arithmetic mean of the sample is smaller than the hypothetical mean. Therefore, the trend towards healthy behavior is negative in patients, which means, this hypothesis is realized.

This result agreed with a study of Masoudi and Si Bashir, which concluded the negative trend towards healthy behavior for coronary artery disease patients, due to the fact that patients were practicing unhealthy behaviors such as not following the doctor's instructions, not taking medication regularly and not refraining from eating some harmful foods and others. (Masoudi & Si Bashir, 2016) This conclusion reached by the present study also agreed with the findings of a study Zaatout Ramadan, which was resulted that the negative trend towards health behavior is predominant in the category of patients with chronic diseases. (Zaatout & Qurishi, 2014)

Conclusion:

In light of the results obtained through this study, which addressed the issue of compensatory health beliefs and their relationship to the trend towards preventive health behavior among patients with chronic renal insufficiency in the state of Ghardaia, the following results were reached:

- There is no statistically significant relationship between health beliefs and the trend towards healthy behavior in patients with chronic renal insufficiency.
- The study sample has high compensatory health beliefs.
- The trend towards healthy behavior in the study sample is negative.

- Suggestions and recommendations:

Through the results obtained from the study, some of the following suggestions and recommendations can be put forward:

- Conducting more research that addresses the different levels and types of health beliefs among patients with chronic diseases.

- Conducting more comparative studies to uncover the relationship between compensatory health beliefs and the trend toward healthy behavior among various chronic disease patients.
- Conducting research on changing health behavior that threatens health through effective methods and strategies for patients with chronic renal failure.
- Proposing a preventive program against chronic diseases, including kidney failure, according to the health beliefs model.
- Conducting in-depth studies concerned with encouraging positive trends towards healthy behavior among patients with chronic diseases .
- Training those in charge of the health service in various chronic disease clinics on psychological factors and their impact on patients with chronic diseases.
- Spreading health awareness and encouraging healthy behaviors through various means of civil society and various media outlets.

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