

Association between Cognitive Representation and Self- Care Behaviors among Patients with Hypertension

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Abstract

Objectives: This study aimed to assess the association between cognitive representation and self-care behaviors among patients with Hypertension.

Method: A descriptive correlational study conducted in Hilla city during the period from October 1st 2022 to March 15th 2023. A non-probability (convenience) sample consist of (370) patients who diagnosed with hypertension and visits primary health care centers in Hilla City. The validity of the questionnaire was verified by experts and its reliability was verified through a pilot study. The total number of items included in the questionnaire was 26 items to assess cognitive representations and 20 items to assess self-care behaviors. Data were collected through the interview and analyzed by applying descriptive and inferential statistical analysis.

Results: The results indicated that the average age of the respondents is (52.39) years, (51.9%) were female, (50%) were middle monthly income, (85.4%) were married, (20.5%) were college and above graduated, (40.3%) were unemployment, (57.3%) were positive family history and (51.6%) were duration of disease >5 years. Overall cognitive representation, (55.7%) were low level and self-care, (57%) low level among patient's hypertension are differs according to age, gender, Marital status, monthly income, occupation, education level, occupation and duration of hypertension. The simple (positive) correlation between cognitive representation and self-care among patients with hypertension.

Conclusions: The study showed that the rate of cognitive representations and Self-care behaviors of the respondents was low level. A statistically significant positive correlation between cognitive representation and self-care behaviors. The study adds attention regarding health education to all segments of society towards self-care among patients with hypertension. Further study is needed to explore the strategies that maintain adherence self-care among patients in order to improve their quality of life.

Keywords: Self-Care Behaviors, Cognitive Representation, Patients, Hypertension.

INTRODUCTION

Hypertension is a dangerous medical problem that significantly increases the risk of renal failure, blindness, heart attack, and stroke. It is among the world's major causes of early mortality (1). Hypertension is sometimes referred to as the "silent killer" and is a significant risk factor for cardiovascular disease because to its widely varying frequency throughout. There may be a link between the rising rates of hypertension in developing nations and their own economic change (2). According to the most recent data from

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population-based research, there are more than 1.4 billion hypertensive adult patients worldwide, and 10.7 million of them die from complications related to their hypertension each year (3) (4).

Cognitive representations are including perceptions about the disease's symptoms, timeline, understanding, consequences, and ability to control it, whereas emotional representations involve anxiety and negative emotional responses to the disease (5). Cognitive representations, also referred to as illness perceptions—represent the patient's own common sense beliefs their condition. Patients' perspectives on their disease and subsequent treatment are likely to have an impact on a variety of elements of their experience, including side effects (such as the development of depression or anxiety) and other health outcomes. As a consequence, researching various aspects of illness perceptions may be helpful in developing therapies that try to lessen the recurrence of these symptoms (6). Hypertensive patients' illness representation (IR) influences their coping behavior and blood pressure management success (7).

Self-care is characterized as a dynamic process requiring knowledge, attitude, commitment, self-regulation, power, and self-efficacy in people with hypertension. Older persons with hypertension who practice self-care benefit from decreased risk of complications, a lower hospitalization rate, fewer healthcare expenses, and an improved quality of life (8). The key elements of SCBs for hypertension are medication compliance and lifestyle changes such as diet, exercise, quitting smoking, and no alcohol use (9).

The creation of specialized intervention strategies is thus urgently needed to enhance self-care participation and adherence to medication regimens. It is crucial to comprehend patients' causal beliefs regarding hypertension in order to create management plans that are cognizant of patients' lay beliefs and cognitive requirements. Regarding the origin of hypertension, scientific proof points to a connection between genetic and intrinsic characteristics, as well as lifestyle decisions (10) (11).

METHODS

The descriptive correlational study design technique was adopted by standard questioning individuals of the study population with the sole purpose of describing the examined phenomena in terms of its nature and degree of presence was conducted during the period from 1st October 2022 to 15 March 2023. The study was carried out in Hilla City/Babylon Province, at two Primary Health Care Sectors. These sectors are including (Hilla First and Second). a non-probability sampling method (convenience) was selected to obtain representative and accurate data. The size of the sample was (370) from patients who were attend at primary health care centers in Hilla City.

The questionnaire was consisting of three parts, which are: Part I: Socio-demographic Data Form: This part is concerned with the collection of demographic data obtained from the patients and consists of (8) items, which are; age, gender, monthly income, marital status, level of education, occupation, duration of HTN and history of family members of HTN. Part II The Cognitive Representations Questionnaire in Patients with Hypertension. was used to measure Cognitive Representations in Patient with hypertension scale is consisting from (26) items involves four dimensions. These are symptom (16 items), negative medication behavior (5 items), positive medication behavior (4 items) and healthy heart diet (two items). It is a 26-item measure that assesses individuals on a 3-point Likert scale ranging from 1 = Never to 3 = always. The total score can range from 26 to 78 with higher score indicating better cognitive representations. Part III: The Self-care Behaviors Questionnaire in Patients with Hypertension. was used to measure Self-care Behaviors in Patient with hypertension scale is consisting from (20) items measure with each question having 3 response options: Never = 1, sometimes = 2, and always = 3.

A total score can range from 20 to 60 with higher score indicating better self-care behavior.

The researcher interviewee the patients with hypertension, explained the instructions, answered their questions regarding the form, urged them to participate and thanked them for the cooperation. The interview techniques were used on individual bases, and each interview (15-20) minutes after taking the important steps that must be included in the study design.

Statistical analysis was done using SPSS version 26. Descriptive statistics were used to describe demographic and disease characteristics of the patients with hypertensions. Percentages and frequencies were used for the categorical variables while mean, standard deviations and range (minimum-maximum values) were calculated for the continuous variables. Normality testing was done for numerical data using Kolmogorov-Smirnov, and Shapiro - Wilk test, which showed data was normally distributed.

Pearson's correlation was computed to explore the bivariate correlation between hypertension self-care and cognitive representation scores.

The association for numerical data were tested using independent t-test and One-way ANOVA. Statistical significance was considered whenever the P value was equal or less than 0.05.

RESULTS

Table (1): Socio-Demographic Characteristics

Variable	Category	Frequency (N=370)	Percentage %
Age (years)	>40	60	16.2
	40-60	232	62.7
	< 60	78	21.1
Mean± SD (range)		52.39±10.89 (23-85)	
Gender	Male	178	48.1
	Female	192	51.9
Monthly income	<300,0000	4	1.1
	300,000_600,000	59	15.9
	601,000_900,000	185	50
	901,000_1200,000	101	27.3
	1201,000_1500,000	15	4.1
	>1500,000	6	1.6
Marital status	Single	13	3.5
	Married	316	85.4
	divorced	20	5.4
	Widow	21	5.7
Educational level	Unable to read and write	18	4.9
	Read and write	44	11.9
	Elementary school	69	18.6
	Middle school	58	15.7
	High school	52	14.1
	Diploma	53	14.3
	College and above	76	20.5

Occupation	Governmental employ	133	35.9
	Free-business	59	15.9
	Retried	29	7.8
	Unemployment	149	40.3
Family history	Yes	212	57.3
	No	158	42.7
Duration of disease (years)	>5 years	191	51.6
	5_10 years	120	32.4
	< 10 years	59	15.9
Mean± SD (range)		6.71±4.71(1-30)	

N: number

Finding show participants age, the mean age is 52.39 (± 10.89), the age 40-60 years old were recorded the highest percentage (62.7%).

In terms of gender, more than half were female (51.9%) as compared to male participants (48.1%).

In terms of monthly income, half of participants (50%) expressed 601,000-900,000.

Marital status related findings, the majority of participants were married (85.4%).

Regarding education, College and above graduated were mostly among studied sample (20.5%).

Concerning occupation, most of participants were unemployment (40.3%).

Family history related findings, (57.3%) they expressed a family history of high blood pressure. About half of the participants reported having blood pressure less than 5 years ago.

Table (2): Cognitive Representation and Self-care among patients with Hypertension

Scales	Min.	Max.	Mean	Stander Deviation	Score	N	%
Total Cognitive representation (Q26)	33	65	47.94	4.68	High	164	44.3
					Low	206	55.7
Total self-care (Q20)	34	58	47.46	4.51	High	159	43
					Low	211	57

#: Percentage, N: number

table shows the statistically distribution of cognitive representation main domains among patients with hypertension and include the following findings:

Overall Cognitive representation, (55.7%) were low level (Mean= 47.94; SD=4.68).

In terms of self-care, findings demonstrated that the (57%) of patients with hypertension were low self-care (Mean= 47.46; SD=4.51).

Table (3): Correlation between Cognitive Representation and Self-care

Patients with HTN		Cognitive Representation	Self-care
Cognitive Representation	Pearson Correlation	1	.290**

** . Correlation is significant at the 0.01 level (2-tailed).

There were significant (positive) correlation between cognitive representation and self-care among patients with hypertension ($r = .290$; $p = .000$).

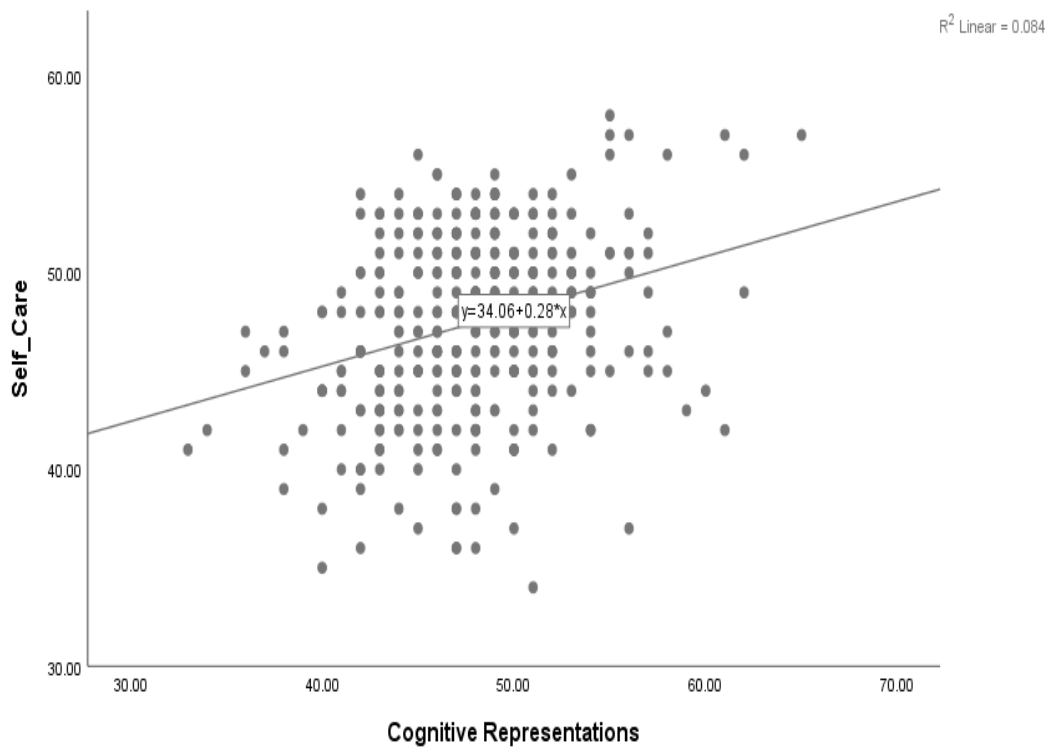


Figure 1. Cognitive Representation and Self-care

DISCUSSION

The mean age in current study is (52.39), the age 40-60 years old were recorded the highest percentage (62.7%). This result agrees with the study conducted in Indonesia, according this study, the average age of the respondents is (53.10) years among patients with hypertension the highest group of participants among the age (40-60) (12). This result also in line with result from Baghdad City in Iraq, the most of participants old age (13). This demonstrates that as people age, plaque builds up in their arteries and their blood vessels congeal and lose flexibility, making it difficult for the heart to pump blood through the channels. The strain needed by the heart to sustain blood flow in the circulation will rise as a result of these alterations in blood vessels (12).

In terms of gender, the female was predominated (51.9%) as compared with those who are male (48.1%). This finding is supported by findings from Al-Diwaniyah City in Iraq was female more male (51.7%) (14). This study contrasts with a study from Missan Center for Cardiac Diseases in Iraq the result was that men more than women and their percentage was (55%) (15).

Regarding monthly income, study participants expressed was (601,000_900,000) dinar more sample (50%). This result agrees with study conducted in Slovakia was middle income monthly More than half of the participants (16). This results are different by study conducted in Iraq, find that the most of patients with insufficient income (17).

According to marital status findings, the majority of the studied sample (85.4%) were married. This result similar study conducted in Hilla city was a descriptive cross sectional the percentage of married was the highest (84%) (18). This finding is consistent with the findings study conducted in Turkey, who evaluated 147 hypertensive patients admitted to Akdogan Health Center in order to determine the influential factors influencing

medication adherence in hypertensive patients. The majority of patients (83.7%) in this study were married. According to the researcher, the stress of family life and large responsibilities on individuals may lead to an increase in the incidence of hypertension among married people (19).

Respect to the education level, most of patients expressed College and above graduated (20.5%). This result agrees with study in Al-Najaf, the educational level the highest percentage 22% was graduated from university and above of education (20). This finding disagree study carry out in Ethiopia was Unable to read and write (32.4%) the highest percentage of participants in the study (8).

In regard with occupation, most of participants were Unemployment (40.3%). This finding is agree by findings from Iraq most of the sample participating in the research were unemployed (21). This result disagrees with study in Iraq, the government employee was the highest percentage of the participants (22).

Duration of illness related findings, almost half of study sample exhibited less than 5 years (51.6%). Concerning duration of illness, most of participant have hypertension for (1-5years). This result agree study conducted in Iraq, that high percent (46%) date of medically diagnosis of hypertension at the (1-5) years (23).

And the largest proportion of patients who have a family history of Hypertension (57.3%). This result is agreeing with study carry out in Baghdad, Iraq The positive family history of hypertension (63.9%) (24).

In this study overall Cognitive representation, (55.7%) were low level. The majority of participants in this study had limited understanding of hypertension and believed it was a less serious condition. This result agrees with study conducted in Nepal across-sectional study which was conducted among 400 hypertensive patients, the average disease perception score was 40.47 3.151, which indicated a less alarming perception of hypertension (25).

In contrast to the finding of our study, conducted in the United States a cross-sectional, correlational survey design collected data from a convenience sample of African immigrant women of Nigerian descent in the United States was sample (127). As a result, 77.8% of Nigerian women had lived in the US for more than years. Using the variable to evaluate the migration effect "years of residence in the United States," For Nigerian women (0-5 years, 6-10 years, and >10 years), there was a significant difference in hypertension knowledge between the three residency groups; the longer the years of residence, the higher the knowledge of hypertension. the greater one's understanding of hypertension (26).

In terms of self-care, findings demonstrated that the (57%) of patients with hypertension were low self-care. This result agrees with study conducted in Ethiopia a cross-sectional study was A total of 276 patients, findings from this study showed less than 50% of patients adhered to self-care such weight control, salt restriction, exercise, and medication (27). A study that did not agree with current study a cross-sectional survey was conducted, with 318 hypertensive patients, in a rural area of Beijing, China, were found to have a high level of self-care. More than half of the sample (61.3%) reported being adherent to their antihypertension medication protocols, and 51.9% of the subjects were engaging in physical exercise on most days of the week (28). The issues that prevent the majority of respondents from falling into the category of good self-care behavior include inadequate adherence to a healthy diet, inconsistent exercise, and poor stress management (12).

There were significant (positive) correlation between cognitive representation and self-care among patients with hypertension. This study demonstrated that improving cognitive representation could be effective in promoting self-care behaviors, understanding people's perceptions of their illnesses is essential for developing effective strategies for dealing

with chronic illnesses. This study a similar with previous findings about hypertensive patients conducted in Korea, this study demonstrates the importance role of illness representations in terms of predictability and coherence in predicting patients' self-management behaviors (29). Another study performed in Indonesia obtained a similar result, Illness perception had a positive relationship ($r = 0.771$) with self-care behaviors ($p = 0.000$) among patients with hypertension (30). This result disagrees with study conducted in Malta, illness perception was negatively correlated with self-care (31).

CONCLUSIONS:

The study showed that the rate of cognitive representations and Self-care behaviors of the respondents was low level. A statistically significant positive correlation between cognitive representation and self-care behaviors. The study adds attention regarding health education to all segments of society towards self-care among patients with hypertension. Further study is needed to explore the strategies that maintain adherence self-care among patients in order to improve their quality of life.

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