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Exploring the Relationship Between Demographic Characteristics and Adults' Knowledge about Hypertension in the Sinjar region

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Abstract

Hypertension is considered one of the most serious diseases in the world, due to its widespread and severe consequences. A person's knowledge about this disease plays an essential role in its prevention and control. This cross-sectional study was conducted to measure adults' knowledge about hypertension disease in the Sinjar region from March 20, 2024, to September 7, 2024. The study included the use of a convenient sample of 180 adults attending Sinjar General Hospital. The data was collected by adopting the hypertension knowledge test scale (HK-LS), and by using the interview method. Based on the study's results, Male participants made up the majority (55.6%), and their mean age was 42.09 ±13.83 years. 61.7% of the participants had hypertension, and more than 58.3% of them had a family history of this medical condition. Lastly, the study demonstrates that there was a highly significant link ($p<.05$) between participants' awareness of hypertension disease and their educational background (48%), employment position, and family history of hypertension (60.5%). The current study concludes that the majority of persons in the Sinjar region had a family history of hypertension and were jobless. An individual's educational background, career, and family history of hypertension are positively connected with their degree of hypertension knowledge.

Key words: Hypertension, Knowledge, Adult, Relationship, prevention

Introduction

Chronic diseases are the main threat to human life during the twentieth and twenty-first centuries. The reason for this is due to the large spread of these diseases and the accompanying physical, psychological, and social complications, in addition to the horrifying number of fatalities brought on by these incidents. Worldwide, hypertension is the most common major chronic illness [1,2].

According to estimates, there are 1.28 billion cases of this illness worldwide, with middle-aged individuals making up the majority. Two-thirds of these cases occur in low- and middle-income nations, while 35.6% of cases occur in Iraq [3].

The Global Burden of Disease study in 2015 revealed that one of the leading causes of mortality and morbidity in the Eastern Mediterranean regions including Iraq is HTN, which has increased by 83.3% since 1990, and ischemic heart disease (IHD) as a cardiovascular complication of HTN which has increased by 17.2% [4, 5].

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This huge number of morbidity and mortality of hypertension disease have been made this terrible condition as a number one priority of the Iraqi public health care delivery system [6]. Standardized criteria for assessing and classifying hypertension must be developed by the World Health Organization (WHO). When the diastolic blood pressure (DBP) is 90 mmHg or greater and the systolic blood pressure (SBP) is 140 mmHg or above, the WHO considers the condition to be hypertension. The development of evidence-based treatment options and international comparisons are encouraged by this universal definition, which ensures consistency in the diagnosis and classification of hypertension worldwide. Elevated reading must appear at least three times over a few weeks in order to be diagnosed with hypertension [7, 8]. The seriousness of hypertension disease is not limited to death, but it results in many serious biopsychosocial problems such as stroke, ischemic heart disease, anxiety, depression, divorce, and job loss. These obstacles cause a significant deterioration in the quality of life of the person suffering from this disease [9].

However, the good news here is that hypertension is considered among a limited number of controllable and preventable diseases. There are more than ten modifiable risk factors (such as quitting smoking, avoiding salty foods, and healthy eating) that could be used to prevent hypertension disease and its related complications. Despite the great effort that has been made to find an easy way to motivate hypertension disease to adopt healthy lifestyles. However, changing people's behavior i s still a complex challenge. The behavior change process depends on many factors such as individual perception of susceptibility to disease, disease seriousness, the benefit of behavior, and so on [10,11].

Hypertension is a fatal disease that has many psychological, physical, and social complications that negatively affect a person's quality of life. This disease has a large prevalence in Iraq, especially in adults. In order to regulate and prevent disease, an individual's knowledge is crucial. It is important to measure and determine the knowledge of adults in the Sinjar region about hypertension disease. This new knowledge will contribute to filling the scientific shortage about hypertension disease. It will also help those in the health field to know the levels of the disease around patients and how to educate them about controlling it [12].

Many scientific theories, such as the theory of health beliefs, indicate that a person's knowledge about disease plays a key role in motivating people to adopt a healthy lifestyle.

Since hypertension, or high blood pressure, is a significant health concern affecting a significant proportion of the population. It is a major risk factor for various cardiovascular diseases, including heart attacks and strokes, and the adults in the Sinjar region do not have sufficient knowledge about hypertension, so it is crucial to conduct this study to enhance awareness, address disparities, and develop targeted interventions for effective prevention and management of hypertension-related complications.

Methodology

Study Design:

A descriptive study using a cross-sectional design was conducted to assess the adults' knowledge about hypertension disease in the Sinjar region, for the period from 20 March 2024 to 7 September 2024.

The setting of the Study:

The study was carried out at Sinjar General Hospital in Sinjar region, Nineveh Governorate, Iraq. This Hospital had morning and night shifts, as much as 24 hours of work.

Sample of the Study:

The sample was selected using a nonprobability purposive sampling method of one hundred eighty (180) adult individuals living in the Sinjar region and attending Sinjar General Hospital were conveniently selected and participated in the study. The inclusion criteria for the study samples were:

- The age of all participants is between $18 \geq 69$ years old.
- Alert patients who are not experiencing any changes in awareness.
- Not suffering from renal failure or receiving hemodialysis or peritoneal dialysis.
- Not receiving chemotherapy or suffering from cancer.

Study Instrument and Collection Method:

A semi-structured interview questionnaire was developed on the basis of study objectives after an extensive literature review by fifteen experts of physician experts, and colleagues were used for conducting face-to-face interviews. **Part I**: It consisted of Socio-demographic information of community people (age, gender, occupation, education, family history of hypertension. **Part II:** It was made up of surveys about individuals' knowledge about hypertension. The Hypertension Knowledge Scale (HK-LS) was employed to gather information from the subjects. Erkoc et al. [13] created this scale, which has 22 items with six sub-dimensions: definition, medical treatment, drug compliance, lifestyle, food, and problems.

Validity of the Instrument:

Fifteen professionals with over 10 years of expertise in the medical and nursing fields were consulted to assess the study instrument's face validity.

Statistical Analysis:

The Statistical Package for Social Science software version (26), which was used to analyze the data, contained:

1. Descriptive analysis:

a- Tables (Frequencies and Percentages).

b- Figure (Bar chart)

c- Mean of score.

2. Inferential analysis:

A. The Chi-Square statistics are frequently employed to examine correlations between categorical data.

B. Pearson correlation coefficient (r-test) was applied for the correlation between variables.

Study limitations.

The most prominent challenge was obtaining a sufficient number of participants for the study, and this was due to a number of reasons, including the delay in obtaining administrative approvals to conduct research in health institutions in the city of Mosul, and the refusal to allow research to enter a number of those institutions because of their lack of readiness to conduct research and interviewing the patients.

The Results

Table 1 indicates that the mean age of participants is (42.09 ±13.83) years old. Most of the participants (25.6%) are in the age group of 39-48 years old. Concerning other demographic characteristics, the table shows that most of the participants were male (55.6%), graduated (31.1%), and unemployed (67.2%).

Figure 1 illustrates that (61.7%) of study participants were suffering from hypertension, and over 58.3% of them had a family history of hypertension.

Table 2 shows the participants' degree of knowledge on hypertension sickness is displayed in this table. According to the table, participants' knowledge of the following research domains is low: definition, medical treatment, medication compliance, lifestyle, dietary habit, and complications (18.3%, 12.2%, 9.4%, 6.7%, 11.1%, and 19.4 of participants, respectively). The participants' overall level of expertise is

poor (4.4%).

Table 3 shows that the association between participants' knowledge of hypertension disease and their educational background, occupational position, and family history of the condition was highly significant, as this table demonstrates. people in high-stress occupations may be more aware of hypertension and may have a higher level of knowledge about the condition overall, based on their own experiences or through workplace health programs. These results suggest that among those who were employed, knowledge about hypertension disease was higher.

Table 1: Demographical Characteristics of the Study Participants (n=180)

Characteristics	Items	F	%
Age	18-28	41	22.8
	29-38	33	18.3
	39-48	46	25.6
	49-58	35	19.4
	59-68	19	10.6
	≥ 69	6	3.3
	total	**180**	**100%**
	Mean (SD)	**42.09 (13.83)**	
Gender	Male	100	55.6
	Female	80	44.4
	total	**180**	**100%**
Educational background	illiterate	25	13.9
	Elementary school	47	26.1
	Intermediate school	16	8.9
	High school	36	20
	Graduated	56	31.1
	total	**180**	**100%**
Occupation	Employed	59	32.8
	Unemployed	121	67.2
	total	**180**	**100%**

F: Frequency; %: percentage

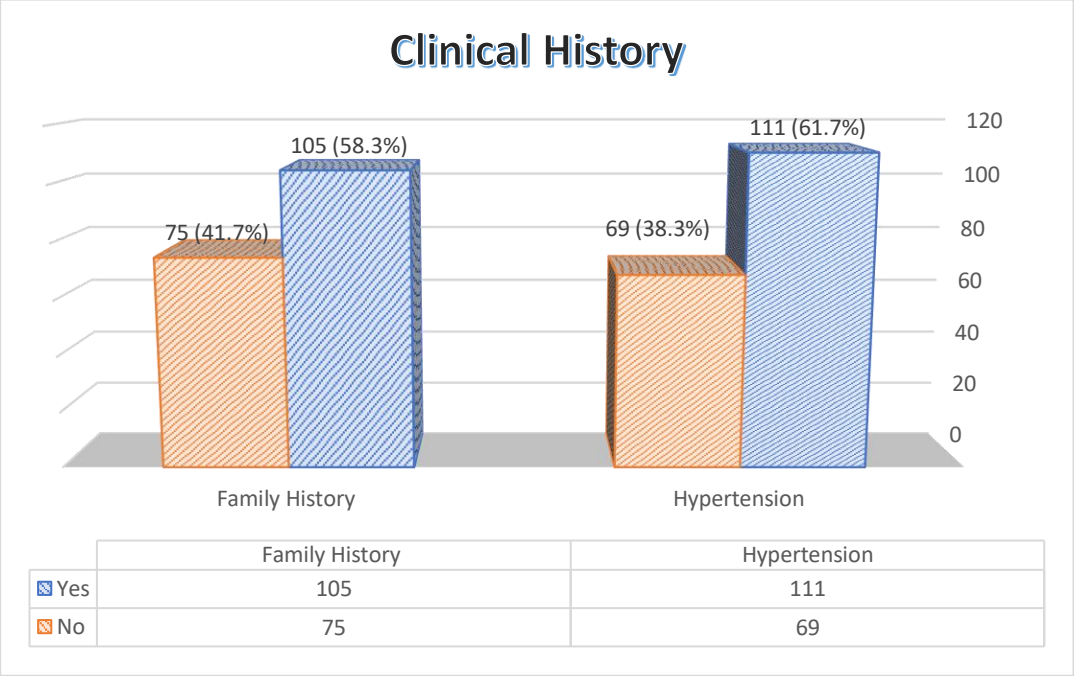

Figure-1: The Clinical History of Study Participants (n=180)

Table 2: Level of Knowledge About Hypertension Disease Among Study Participants (n=180)

Domain	Level of Knowledge					
	Low		Moderate		High	
	F	%	F	%	F	%
Definition	33	18.3	41	22.8	106	58.9
Medical Treatment	22	12.2	65	36.1	93	51.7
Medication compliance	17	9.4	90	50	73	40.6
Lifestyle	12	6.7	63	35	105	58.3
Dietary habit	20	11.1	44	24.4	116	64.4
Complication	35	19.4	54	30	91	50.6
Total	**8**	**4.4**	**77**	**42.8**	**95**	**52.8**

F: Frequency, %: percentage
Level of knowledge cut-off points:

cut-off points	Definition	Medical Treatment	Medication compliance	Lifestyle	Dietary habit	Complication	Total
1. low	(0)	(0)	(0)	(0-1)	(0)	(0-1)	(0-6)
2. moderate	(1)	(1-2)	(1-2)	(2-3)	(1)	(2-3)	(7-14)
3. high	(2)	(3-4)	(3-4)	(4-5)	(2)	(4-5)	(15-22)

Table 3: Association Between Participants Sociodemographic Characteristics, and Hypertension Disease Knowledge (n= 180)

Characteristics	Items	Hypertension Knowledge						χ^2	*P*
		Low		Moderate		High			
		F	%	F	%	F	%		
Age	18-28	0	0	16	8.9	25	13.9	17.582	.062
	29-38	1	0.6	14	7.8	18	10.0		
	39-48	5	2.8	16	8.9	25	13.9		
	49-58	2	1.1	13	7.2	20	11.1		
	59-68	0	0	13	7.2	6	3.3		
	≥ 69	0	0	5	2.8	1	0.6		
Gender	Male	5	2.8	44	24.4	51	28.3	.370	.831
	Female	3	1.7	33	18.3	44	24.4		
Educational background	Illiterate	1	0.6	16	8.9	8	4.4	**36.566**	**.000 HS.**
	Elementary	1	0.6	27	15.0	19	10.6		
	Intermediate	3	1.7	9	5.0	4	2.2		
	High school	2	1.1	15	8.3	19	10.6		
	Graduated	1	0.6	10	5.6	45	25.0		
Occupational status	employed	1	0.6	12	6.7	46	25.6	**22.374**	**.000 HS.**
	unemployed	7	3.9	65	36.1	49	27.2		
Hypertension	Yes	1	0.6	34	18.9	40	22.2	3.004	.223
	No	7	3.9	43	23.9	55	30.6		
Family History	Yes	2	1.1	42	23.3	67	37.2	**9.356**	**.009 HS.**
	No	6	3.3	35	19.4	28	15.6		

F= Frequency; %= Percentage; χ^2= Pearson Chi-Square

Discussion

The table (1) shows the sociodemographic traits, as the majority of participants were male, middle-aged, graduates, and jobless. On the other hand, figure 1 shows the clinical history of the participants in the study, as it shows that about half of the participants suffer from hypertension, and most of them have a family history of the disease.

Table 2 shows the level of knowledge about hypertension among the participants. It is clear from the table that the majority of the participants have a level of knowledge ranging from moderate to high. Generally, the table indicates that the largest percentage of the low level of knowledge lies in the dimensions of knowledge related to (definition, medical treatment complications).

This means that adults in the Sinjar region do not have sufficient knowledge about the pathophysiology of hypertension in terms of definition, treatment, and complications of the disease. This result shows the need to concentrate on a health education program about hypertension disease that focuses on adults and on the definition, treatment, and complications of the disease. In general, the number of people who had

a total low in the level of knowledge did not exceed 5%. The result of the moderate to high level of knowledge related to hypertension is consistent with a number of studies conducted during the past years [10, 14-16]. Table 3 shows that participants' understanding of the hypertension condition varied significantly according to three demographic factors (family history, work position, and educational attainment). This suggests that those who are working, have a family history of HT, and have more educational attainment would know more about the condition than others. The results of this study are different from those of a study by Buang et al. [17], which found that participant age was related to understanding of hypertension.

Conclusion

The survey found that (4.4%) of respondents had an inadequate understanding of hypertension, and over half of respondents had sufficient awareness of the condition. While the other independent factors did not statistically significantly correlate with knowledge level, there was a highly significant association between participants' knowledge of hypertension disease and their educational background, occupational position, and family history of the condition. The majority of individuals believe that poor eating habits, a sedentary lifestyle, stress, pollution in the environment, lack of awareness, and lifestyle choices all contribute to hypertension.

Recommendations

Promoting HTN education and BP self-measurement among adult patients might be the responsibility of nurses and doctors. It is advised that national education efforts focused on increasing awareness of HTN be combined with the routine practice of BP self-measurement among the general public.

Conflict of interest: NIL

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