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Knowledge and quality of life of hypertension among hypertensive patients in Baghdad, Iraq: A cross-sectional study

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Abstract

High blood pressure, or hypertension, is an important public health problem that contributes considerably to the burden of illness on the planet. The assessment of knowledge among patients with hypertension is vital in identifying gaps in understanding the disease, its risk factors and the value of following a treatment plan. By shedding light on the knowledge and quality of life of hypertension patients in Baghdad, Iraq, the study's findings will add to the body of current knowledge on the condition. The aim of this study is to evaluate the knowledge of hypertension and the quality of life among hypertensive patients. A cross-sectional study was carried out in Baghdad City, Iraq. The questionnaire was used from November 20th 2022 to May 20th 2023. An estimated 385 people made up the sample. Most of the patients are above the age of 50, with 60.3% (n=232) being males and 39.7% (n=153) being females. Majority of the patients 80% (n=308) had good knowledge regarding hypertension. The majority of patients reported no issues with mobility, personal care, usual activities, pain/discomfort, and anxiety or depression. In contrast, gender was significantly associated with activities of daily living, personal care, pain or discomfort, and anxiety or depressive symptoms. The quality of life and knowledge of hypertension were highly correlated. In conclusion, the study's findings offer insightful information on the knowledge and quality of life of hypertension patients.

Keywords: Health-related quality of life (HRQoL), hypertension, knowledge, the European quality of life scale (EuroQol)

Introduction

High blood pressure, or hypertension, is an important public health problem that contributes considerably to the burden of illness on the planet. It is a long-term condition characterized by persistently high blood pressure, which increases the risk of heart attacks, strokes, and other cardiovascular disorders [1]. The prevalence of hypertension is on the rise, particularly in developing countries, posing a significant challenge to healthcare systems. Effective management and bettering health outcomes in this group depend on an understanding of the knowledge and quality of life among individuals with hypertension [2].

Several studies have investigated the knowledge and awareness of hypertension among patients in different countries, providing valuable insights into the level of understanding and perception of the disease. However, little study has been done especially on the knowledge and quality of life of hypertension patients in Baghdad, Iraq [3]. Iraq is a country that has faced numerous health challenges in recent years, including the burden of non-communicable diseases like hypertension. Therefore, it is imperative to carry out a thorough study to evaluate patient knowledge and quality of life about hypertension in Baghdad, Iraq [4].

The assessment of knowledge among patients with hypertension is vital in identifying gaps in understanding the disease, its risk factors and the value of following a treatment plan. It can assist in creating specialized educational initiatives and self-management training programs for patients. For evaluating the effect of hypertension on general well-being and identifying areas that need attention and assistance, it is also critical to comprehend the quality of life in this group [5].

Health-related quality of life (HRQoL) refers to an individual's subjective perception of their overall well-being and the impact of health conditions or treatments on their daily life. It encompasses various aspects such as physical health, mental health, social functioning, and general quality of life. HRQoL is a multifaceted notion that takes into account an individual's capacity to function and participate in worthwhile activities in addition to the presence or absence of sickness. Assessing HRQoL is essential in healthcare research, as it provides insights into the effectiveness of interventions, treatments, and healthcare policies. It helps healthcare professionals and researchers understand the broader impact of health conditions on individuals beyond clinical outcomes. By considering HRQoL, healthcare providers can develop more patient-centered approaches and improve the overall quality of care [6].

By shedding light on the knowledge and quality of life of hypertension patients in Baghdad, Iraq, the study's findings will add to the body of current knowledge on the condition. The results will help identify areas for improvement in patient education and healthcare delivery, leading to better management of hypertension and improved health outcomes in the Iraqi population. We also investigated the connection between the hypertensive population of Baghdad, Iraq, and their understanding of hypertension. The study will make it easier to identify the variables affecting life quality and to create and deploy hypertensive population-specific educational programs to improve quality of life.

Methodology

A cross-sectional study was carried out in Baghdad City, Iraq in order to assess the patients' knowledge about hypertension and their quality of life in terms of their health. from November 20th 2022 to May 20th 2023. Ethical approval was obtained from each patient with hypertension for being participant in the present study. The study is carried out in Baghdad Medical City's outpatient clinic, which is part of a network of educational hospitals in Bab Al-Moatham, Baghdad, Iraq.

Participants in the trial had to be 18 years of age or older, have an established diagnosis of essential hypertension (defined as a blood pressure reading more than 140/90 mmHg on two consecutive occasions), and have been taking an antihypertensive medication for the last three months. Patients with co-morbid conditions, those above the age of 80, pregnant ladies and foreign nationals living abroad were not allowed to participate in the study. In order to gauge their understanding of hypertension, patients with hypertension at Baghdad Medical City were given a self-administrated questionnaire with 21 questions. The questionnaire used was adapted from earlier research [7]. The

questionnaire was used to collect demographic data, the severity of the condition, and the knowledge of the hypertensive patient on its causes, management, and therapy. The majority of the knowledge evaluation was focused on understanding of normal blood pressure ranges.

The European quality of life scale, known as EuroQol, was used to collect data on the quality of living [8]. The five categories of the EuroQol descriptive system include mobility, self-care, routine tasks, discomfort or pain, and depressive or anxious thoughts. Each dimension falls into one of the following two categories (yes or no). The hypertensive patient was asked to choose the box next to the statement in each of the five dimensions that best described their current health status.

An estimated 385 people made up the sample with a 95% confidence level and a 5% margin of error, the sample size was computed online. The data was analyzed using the SPSS program, version 26 (IBM Corp., Armonk, New York).

The data were shown using the mean, descriptive statistics, and frequencies, percentages, mean scores, range, and total score. For two and more than two means difference, The analysis of variance (ANOVA) and t-test for independent samples were used. Age and gender comparisons were made for the Quality of Life ratings across the five aspects. We investigated any relationships between knowledge and Quality of Life using Pearson correlation. Total scores for overall evaluation of knowledge among patients with hypertension are measured as poor (15-25), fair (25.1-35) and good (35.1-45). In addition to total scores of overall evaluations of hypertensive patients' quality of life as Inadequate (5-7.5) and Adequate (7.5-10). Mean of scores was considered as a cut-off point poor, fair, good for evaluation on items of knowledge and quality of life among patients with hypertension. Mean of score ranges are measured as Low (1-1.3); Moderate (1.4-1.6); High (1.7-2). The degree of significance between responds was determined using a P-value of < 0.05.

Results

Table (1) showed that Most of the patients are above the age of 50, with 60.3% (n=232) being males and 39.7% (n=153) being females. A bachelor's degree was held by about 52.2% of the study's participants. 27.7% (n=106) had a monthly income of more than 1.500.000 Iraqi Dinars. 88.6% (n=341) of research participants lived in cities, whereas 11.4% (n=44) lived in rural regions. Almost 36% have suffered hypertension for more than 15 years.

Figure (1) showed that most of the patients 80% (n=308) had good knowledge regarding hypertension. While 14% (n=54) and 6% (n=23) had fair and poor knowledge respectively.

Table 1: Sociodemographic Characteristics of Patients with Hypertension (N=385)

Variables		F	%
Age	18-29	5	1.2
	30-39	14	3.6
	40-49	61	15.8
	≥50	305	79.4
Gender	Male	232	60.3
	Female	153	39.7
Education	No education	37	9.6
	Primary school	45	11.6
	Intermediate school	54	14

	Bachelors' Degree	201	52.2
	Masters' Degree	48	12.6
Occupation	Jobless	128	33.2
	Retired	125	32.5
	Government job	107	27.8
	Businessman	25	6.5
	Non	88	22.8
Socioeconomic	Less than 500.000 IQD	43	11.1
	500.000-1.000.000 IQD	76	19.7
	1.000.001-1.500.000 IQD	72	18.7
	Above 1.500.000 IQD	106	27.7
Residency	Urban	341	88.6
	Rural	44	11.4
Duration of Disease	Less than 1 year	17	4.4
	1-3 years	34	8.8
	4-5 years	51	13.2
	6-15 years	146	37.9
	Above 15 years	137	35.7

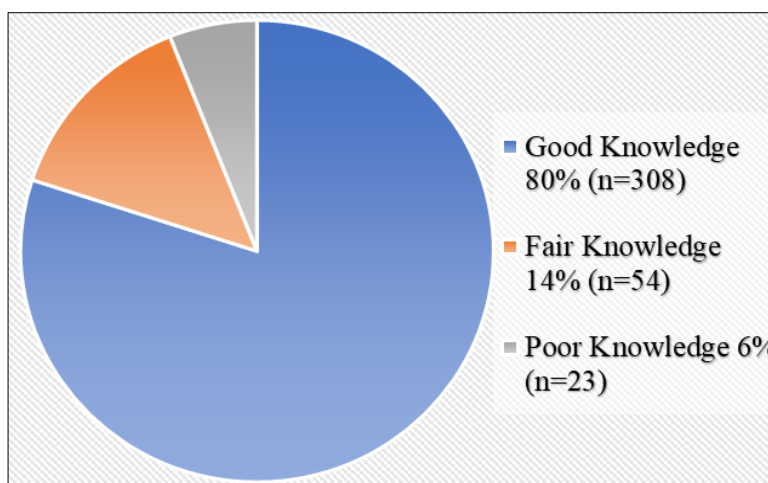


Fig 1: Overall evaluation of knowledge among patients with hypertension (N=385)

Table 2: Mean of scores of knowledge among patients with hypertension (N=385)

Variables	Correct Answers		Incorrect Answers		Mean of Scores	Evaluation
	F	%	F	%		
1. Understand the typical blood pressure ranges.	327	85	58	15	1.8	High
2. The medical word for elevated blood pressure is hypertension.	242	62.5	143	37.5	1.6	Moderate
3. Hypertension might get worse as you get older.	271	70.2	114	29.7	1.7	High
4. The likelihood of getting hypertension is the same for both sexes.	190	49.3	195	50.7	1.5	Moderate
5. The condition of hypertension can be managed.	280	72.6	105	27.4	1.7	High
6. The likelihood of developing hypertension increases with age.	331	85.9	54	14.1	1.8	High
7. Cigarette smoking is a risk factor for hypertension.	346	89.7	39	10.3	1.9	High
8. Consuming fatty foods raises the risk of hypertension.	369	95.8	16	4.2	1.9	High
9. Overweight increases risk of hypertension.	369	95.8	16	4.2	1.9	High
10. Regular physical exercise reduces the risk of hypertension.	353	92.2	32	7.8	1.9	High
11. Increasing salt consumption had no effect on blood pressure.	345	89.4	40	10.6	1.9	High
12. Dietary methods to hypertension control are ineffective.	288	74.9	97	25.1	1.7	High
13. In terms of hypertension, white meat is just as beneficial as red meat.	212	55.3	173	44.7	1.6	Moderate
14. Hypertension can be controlled with medication alone.	323	84	62	16	1.8	High
15. Other life-threatening disorders can result from hypertension.	370	96.5	15	3.5	1.9	High

F: Frequency; %: Percent.

Figure (2) depicted that 70% (n=270) of the patients with hypertension had adequate evaluation regarding their quality of life. While 30% (n=115) had inadequate evaluation.

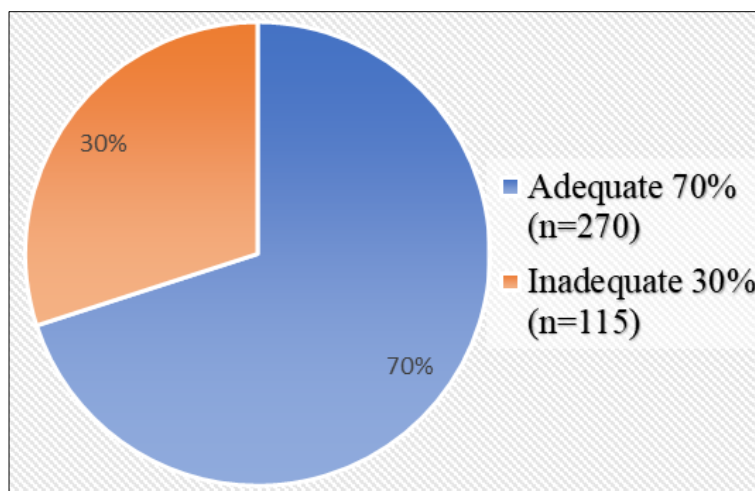


Fig 2: Overall evaluation of quality of life among patients with hypertension (N=385)

Table 3: Mean of Scores and Association of responses about Quality of Life among age and gender (N=385)

Variables	Yes		No		Mean of Scores	E.	Age	Gender
	F	%	F	%			P-value	P-value
1. Mobility								
1.1. I have no problems with walking around.	246	63.6	139	36.4	1.6	Moderate	0.001	0.001
2. Personal Care								
2.1. I have no issues getting dressed or bathing myself.	358	93.5	27	6.5	1.9	High	0.384	0.015
3. Usual activities (such as job, study, home, family, or recreational pursuits)								
3.1. I have no trouble performing my daily chores.	285	74.5	100	25.5	1.7	High	0.003	0.001
4. Pain/discomfort								
4.1. I'm not in any pain or discomfort.	208	54.5	177	45.5	1.5	Moderate	0.184	0.001
5. Anxiety/depression								
5.1. I'm not worried or depressed.	250	65.7	135	34.3	1.6	Moderate	0.785	0.009

E.: Evaluation; F: Frequency; %: Percent.

Table (3) reveals that mobility was not an issue for 63.6% of participants (n=246), personal care was 93.4% (n=358), regular activities were 74.4% (n=285), pain or discomfort was 54.5% (n=208), and anxiety or depression was 65.7% (n=250). However, age was significantly correlated with

mobility (P = 0.001) and usual activities (P = 0.003). In contrast, there was a significant relationship between gender and mobility (P = 0.001), regular activities (P = 0.001), personal care (P = 0.015), pain or discomfort (P = 0.001), and anxiety or depression (P = 0.009).

Table 4: Association between knowledge and quality of life among patients' with hypertension

Variables	Mobility		Personal Care		Usual activities		Pain or discomfort		Anxiety or depression	
	r	P	r	P	r	P	r	P	r	P
Knowledge Among Patients with Hypertension	0.17	0.001	0.2	0.001	0.2	0.001	0.2	0.001	0.14	0.004

Table (4) revealed a significant association between hypertensive patients' quality of life and their knowledge of hypertension. The study findings demonstrated that mobility (P = 0.001), personal care (P = 0.001), everyday activities (P = 0.001), pain/discomfort (P = 0.001), and anxiety/depression (P = 0.004) were strongly linked with knowledge of hypertension.

Discussion

Findings linked with demographic characteristics in this study suggest that male patients outnumber females, which is similar with R. Mesror, *et al.* [24]. Female participant's outnumbered male participants in Khezri *et al.*'s [25] study and Heidari, and Shahbazi's [26] study. According to this study, 80% of hypertension individuals are aware of the conventional blood pressure readings. Some studies conducted in Jordan [9], Saudi Arabia [10], and South Africa [11] found good knowledge regarding hypertension as well. It has been found that disease-related information is one of the most important variables in

achieving good drug adherence [12]. The results of this study also show a substantial relationship between people with hypertension's quality of life and how knowledgeable they are about the condition. The finding is in line with prior research done in Pakistan on individuals with high blood pressure [13]. Our study, on the other hand, has a comparatively bigger sample size and provides information on specific aspects influencing the quality of life for hypertension patients.

The results we obtained in the outpatient study group show that the majority of hypertension patients who are aware of the appropriate blood pressure ranges have a high quality of life. The importance of education in determining one's quality of life has been acknowledged. Higher educated patients typically report greater quality of life. In our study, about 65% of the people with hypertension had a college degree. Prior research suggested that highly educated hypertension patients had a better quality of life, which is consistent with the results published by X. Xu, *et al.* [14], Bardage, *et al.* [15], Youssef, *et al.* [16], Zygmuntowicz, *et al.*

[17], Bhandari, *et al.* [18], Andrade *et al.* [20], Zhang *et al.* [21], Saleem *et al.* [22]. One explanation for this could be because persons with greater levels of education tend to have better levels of health literacy, which includes reduced salt consumption, stopping smoking, drinking less alcohol, and following medical advice are all actions that are regarded to help enhance quality of life [23]. Similar to how education program availability in earlier research showed either a drop or no gain in quality of life levels [19].

Considering the results of the current study on the quality of life of hypertension patients, the overall evaluation of the quality of life was adequate 70% (n=270), which was in consistent with in Gusmão *et al.* study which discovered that patient quality of life scores were quite high (30). On the contrary, the study was disagreement with the studies of A. Eftekhar, *et al.* [28] R. Mesror, *et al.*, [24] and Mohalli, *et al.* [29]

Personal care and pain/discomfort got the highest and lowest scores, respectively, among the five dimensions of quality of life, according to the study's findings.

This study confirmed a prior study that revealed one of the variables is gender impacting quality of life by finding the quality of life of people with hypertension is significantly correlated with gender [27].

The following limitations of the current research are acknowledged. First, even if the research sample is representative of the region, it's possible that the results cannot be extrapolated to other parts of Iraq. Second, because the current study used a cross-sectional design, it is challenging to determine the causal link between knowledge regarding hypertension and patients' quality of life. The participants in our research who had a verified diagnosis of essential hypertension and had been taking antihypertensive medications over the past three months are their strongest points. We also examined a large number of hypertension individuals to identify the unique elements influencing the population's quality of life.

Conclusion

The results presented in this study convey insightful information into the knowledge and quality of life among patients with hypertension. Furthermore, the study identified significant associations between knowledge regarding hypertension and various aspects of quality of life. These findings highlight the importance of addressing knowledge gaps and considering gender and age differences when evaluating and managing hypertension. By enhancing patients' knowledge and addressing their specific needs, healthcare providers can contribute to improved quality of life for those with high blood pressure. Future research and interventions should focus on further exploring the impact of knowledge and addressing the identified associations to promote better outcomes for patients with hypertension.

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Author's Contribution

Not available

Conflict of Interest

Not available

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