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A STUDY ON ASSESSMENT OF KNOWLEDGE, ATTITUDE, PRACTICES AND MEDICATION ADHERENCE IN PATIENTS WITH HYPERTENSION

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ABSTRACT

Background: Hypertension is a prevalent chronic illness that demands proper management through patient education, attitude awareness, practices and medication adherence. This study sought to evaluate these elements in patients suffering from hypertension. **Methods:** A cross-sectional study was done on 90 hypertensive patients aged 40 years and above at a tertiary care hospital. Using a structured questionnaire, data was collected concerning demographic information, clinical history, knowledge, attitudes, practices and adherence to medication. **Results:** Most of the respondents were aged 60-69 (33.3%) while male accounted for (61.1%). 50% had moderate knowledge of hypertension; positive attitude was possessed by 55.6% while 66.7% had good practices regarding their condition but 35% were poorly controlled medically because they did not use medicines as prescribed. **Conclusion**: The study emphasizes the importance of their respective interventions targeting hypertensive control through education on disease course complexity as well as other aspects such as beliefs and behaviors towards treatment adherence.

KEYWORDS: Hypertension, medication adherence, antihypertensive therapy, patient outcomes, non-adherence, knowledge, attitudes, practices, health management.

INTRODUCTION

Hypertension is a serious global health issue, sometimes called a blood pressure disease, which is responsible for many cardiovascular diseases problems. The condition can be described as sustained increased blood pressure levels that can result into serious complications like stroke, heart attack, heart failure or kidney damage. Hypertension results to premature death and it is one of the top ten causes of endemic diseases (WHO). Hypertension affects over 1.13 billion people worldwide and is a leading risk factor for premature mortality. The prevalence of hypertension is rising due to lifestyle factors such as unhealthy diet, physical inactivity, and increased stress levels.[1,2,3]

Prevention of these negative outcomes greatly depends on adequate management of hypertension. Hence pharmacological treatment, lifestyle modifications and follow-up are important strategies in hypertension management practices. Nonetheless achieving optimum BP control has continued to pose challenges due to several factors such as patients' knowledge about it, their attitudes towards it and their observance of medication instructions. There is evidence that patient's attitude towards hypertension and its control play a major role in their adherence to treatment. Negative beliefs about medications or fatalism about the condition may also lead to poor medication adherence which negatively affects treatment outcomes.[4,5,6]

Adopting daily habits linked with how one lives, including diet, exercise and regular checking of blood pressure is very important in controlling hypertension properly. It is possible to know common practices among those who have high blood pressure and whether they conform to recommendations already available so as to understand the real life situation people go through hence modifying treatments rendered accordingly. A vital aspect that determines if hypertensive patients will be kept under control or not is taking their prescribed medications as directed by their physicians. There are many reasons why hypertensive patients may not follow their doctor's prescription including forgetting the dose they are supposed to take at a particular time, having adverse effects from the pills they take or perhaps having too complicated instructions on how to use them. One way of enhancing compliance among these patients leading into better outcomes for them health wise is by knowing about compliance behaviors with medicines.[7,8,9]

This study aims at understanding how informed patients are regarding hypertension and how they control their state. Furthermore, it investigates the association between this knowledge and compliance with prescribed medications. The outcomes will lead to an informed basis for producing individualized programs, comprising educational initiatives, support efforts and policies meant to deal with the challenges of consistent medication intake hence enhancing hypertension handling.[10,11,12]

AIM

The primary aim of this study is to assess the knowledge, attitude, practices, and medication adherence among patients with hypertension.

OBJECTIVES

1. To evaluate demographic characteristics including age, gender, area of residence employment status and literacy level among hypertensive patients.
2. To assess the clinical characteristics of hypertensive patients, focusing on the duration of hypertension, types of antihypertensive medications used, and overall hypertension control status.
3. To determine the level of knowledge regarding hypertension among patients, categorized as poor, moderate, or high, based on their understanding of causes, consequences, and management strategies.
4. To evaluate patients' attitudes towards hypertension management, classifying them as positive, neutral, or negative.
5. To assess the practices adopted by patients in managing their hypertension, categorizing these practices as good or bad.
6. To measure medication adherence among hypertensive patients using the Morisky Medication Adherence Scale (MMAS-8) and to categorize adherence levels as high, moderate, or low.
7. To compare the knowledge, attitude, practices, and medication adherence levels between patients with good control and those with poor control of hypertension.
8. To identify the factors contributing to poor hypertension control, with a particular focus on gaps in knowledge, negative attitudes, inadequate practices, and low medication adherence.

METHODOLOGY

Study Site: The study was carried out at a tertiary care hospital over a period of six months.

Study Duration: The study is conducted over a period of 6 months.

Study Design: This is a Cross-sectional observational study.

Sample Size: 90 patients were enrolled into this study based on stroke diagnosis.

Study Criteria

Inclusion Criteria

1. Adults aged 40 years and above.
2. Patients diagnosed with hypertension for at least one year.
3. Patients willing to participate and provide informed consent.

Exclusion Criteria

4. Patients with cognitive impairments that could affect their ability to provide accurate information.
5. Patients with secondary hypertension or other major comorbidities that could confound the results.

Study method and data collection

The data for this study was collected through a structured questionnaire that aimed to build a detailed profile of patients suffering from hypertension. Demography (age, gender, area of residence, employment status and level of education) were part of the demographic information collected in the questionnaire while clinical details (duration of hypertension, types of medications used, and hypertension control status) were also included. There was also an assessment of knowledge as well as attitudes, practices and medication adherence. Knowledge section consisted of seven questions regarding hypertension which were graded in poor, moderate or high categories while attitudes towards hypertension are assessed through another set of seven questions with results classified as positive, neutral or negative. Practices meanwhile have been identified by looking at patients' lifestyle approaches and management strategies which could either be good or bad with regard to hypertension within them. On this note Morisky Medication Adherence Scale (MMAS-8) was used to evaluate medications compliance while hypertension management was determined through the latest blood pressure readings.

Statistical Analysis

Statistical analysis involved using descriptive statistics to summarize frequencies and percentages.

RESULTS

1. Subject Characteristics.

Subject Characteristics		Frequency	Percentage (%)
Age	40-49	20	22.2
	50-59	25	27.8
	60-69	30	33.3
	70-79	10	11.1
	≥ 80	5	5.6
Gender	Male	55	61.1
	Female	35	38.9
Literacy rate	Literate	70	77.8
	Illiterate	20	22.2
Duration of Hypertension	< 1	15	16.7
	1 to 5	25	27.8
	6 to 10	30	33.3
	> 10	20	22.2
Medication History	Amlodipine	25	27.8
	Lisinopril	20	22.2
	Atenolol	15	16.7
	Hydrochlorothiazide	10	11.1
	Losartan	10	11.1
	Combination Therapy	10	11.1
Hypertension Control	Good Control	65	65
	Bad Control	35	35

The table indicates that most of the patients were aged 60-69 years with 33.3 percent, while ages 50-59 years and 40-49 years constituted 27.8 percent and 22.2 percent, respectively. Males were 61.1 percent while females were only 38.9 percent. Regarding education, the vast majority were literate, while 22.2 percent were illiterate. The duration since the onset of hypertension was: 6-10 years (33.3%), 1-5 years (27.8%), more than 10 years (22.2%), less than a year (16.7%). Concerning the history of medication taken, Amlodipine was found to be the most commonly used with 27.8%, followed by Lisinopril with 22.2%, Atenolol with 16.7%, Hydrochlorothiazide with 11.1%, Losartan with 11.1%, and combination therapy with 11.1%. Finally, the hypertension control status was that 65% of the patients had good control of their hypertension, whereas 35% were poorly controlled.

2. Level of Knowledge, Attitude and Practices towards Hypertension.

Level		Frequency	Percentage (%)
Level of Knowledge	Poor	20	22.2
	Moderate	45	50
	High	25	27.8
Level of Attitude	Positive	50	55.6
	Neutral	30	33.3
	Negative	10	11.1
Level of Practices	Good	60	66.7
	Bad	30	33.3

The table indicates the distribution of knowledge, attitude, and practices on hypertension among the participants in this study. On the level of knowledge, 22.2 percent of the participants had poor knowledge, while 50 percent had moderate knowledge and 27.8 percent had high knowledge on the subject of hypertension. The attitude levels were mainly positive: 55.6 percent of those participating had a positive attitude, while 33.3 percent had a neutral attitude and 11.1 percent had a negative attitude towards the management of their condition. Of the practices, the majority had good practices related to hypertension management and poor practices were found in 33.3%. These results indicate a generally positive attitude and good practices among the majority of participants, although there is need for improvement in knowledge levels.

3. Medication Adherence Levels

Medication Adherence Scores	Frequency	Percentage (%)
High	30	33.3
Moderate	40	44.4
Low	20	22.2

33.3% of participants had high medication adherence, 44.4% had moderate medication adherence, while 22.2% had low medication adherence. This shows that there is need to improve on medication adherence levels of hypertension patients.

4. Reasons for Non medication adherence.

Reason	Frequency	Percentage (%)
Forgetfulness	25	27.8
Side effects	20	22.2
Lack of understanding	15	16.7
Cost of medication	10	11.1
Belief that medication is unnecessary	10	11.1
Other	10	11.1

Forgetfulness was the most common reason for non-adherence (27.8%).

5. Comparison of Knowledge, Attitude, Practices and Medication Adherence Level Among Good and Bad Control

Control Status and level of knowledge, attitude, practices and medication adherence		Good Control (n=65)	Percentage (%)	Bad Control (n=35)	Percentage (%)
Knowledge Level	Poor	10	15.4	10	28.6
	Moderate	30	46.2	15	42.9
	High	25	38.4	10	28.6
Attitude Level	Positive	40	61.5	10	28.6
	Neutral	20	30.8	15	42.9
	Negative	5	7.7	10	28.6
Practice Level	Good	45	69.2	15	42.9
	Bad	20	30.8	20	57.1
Medication Adherence Level	High	30	46.2	5	14.3
	Moderate	25	38.4	15	42.9
	Low	10	15.4	15	42.9

A higher percentage of patients with good control, 38.4 percent, had high knowledge levels compared to those with bad control with 28.6 percent. Good control patients harbored a positive attitude significantly better than bad control patients at 61.5% vs. 28.6%, respectively. The number of those practicing for good control was remarkably higher, with 69.2% as opposed to the mere 42.9% adopting it by bad control patients. Furthermore, the medication adherence in the good control group was much better with 46.2% being highly adherent as opposed to 14.3% of patients with bad control.

DISCUSSION

The distribution of the age group of the study population showed that most of them fall within the 60-69 year age group. This is understandable since it is presumed that the prevalence of hypertension increases with age. Gender-wise distribution showed a greater prevalence of hypertension to be 61.1% in males. The literacy level was very high, at 77.8%, which is important to note since literacy may influence health knowledge and practices. It was deduced from the duration of hypertension that most of the patients were suffering from the disease for 6 to 10 years hence the heavy burden of its long-term management in this population. The history of medication showed that Amlodipine was the most frequently prescribed antihypertensive, while Lisinopril and Atenolol were the next most frequently prescribed antihypertensives. This is concerning and reflects possible gaps in treatment adherence or efficacy, as 35% of patients demonstrated poor control over hypertension.

On KAP analysis, it showed a mixed picture. While 50% of patients showed moderate knowledge about hypertension, a considerable 22.2% had poor knowledge and so would require some additional educational input. Attitude towards management of hypertension was basically positive in 55.6%, while 11.1% had a bad attitude; such patients form a crucial target for behavioral intervention to improve their attitude towards the prospect of disease management. The impact of bad practices on hypertension control is evident in the finding. A significant proportion (33.3%) of participants did not practice what they were taught and as such, this could possibly explain why some are unable to control high blood pressure. This means that even when people have enough information on how to handle their health condition, there are certain factors which prevent them from taking the right steps. Moreover, according to this study, lack of adherence to recommended lifestyle changes has contributed to poor management of hypertension.

The majority of patients showed moderate to high medication adherence levels, as 53.3% had either high or moderate adherence while only 35.6% had low adherence which might be contributing to the 35% of patients who do not control their hypertension very well. In most cases, forgetting to take our medicines was one reason for poor compliance because other reasons included wrongly thinking that you do not need the treatment and side effects. This demonstrates that teaching patients about taking drugs regularly regardless of if they feel sick or not is important too.

Patient having good control were more correspondent to high knowledge (38.4% vs. 28.6%), positive attitude (61.5% vs. 28.6%), good practices (69.2 % vs.42.9%) and high adherence (46.2% vs.14.3%). This suggests that improving knowledge, attitude and practices are necessary for effective hypertension control. Patients who succeed in controlling their blood pressure have been shown to possess improved understanding levels of the disease as well as exhibit encouraging behaviors towards management recommendations. It follows therefore that seeking an improvement among these three parameters would lead to better overall outcomes with regards to hypertension management.

CONCLUSION

The findings support the view that knowledge, attitude, practices, and adherence to medication are essential in raised blood pressure management. Although many patients had good practices and positive attitudes, there were significant gaps in knowledge and adherence that need to be addressed. These findings support that targeted educational and behavioural interventions could appreciably improve hypertension control and, thereby, reduce long-term cardiovascular risks from the disease.

REFERENCES

1. Mills KT, Stefanescu A, He J. The global epidemiology of hypertension. Nat Rev Nephrol, 2020 Apr; 16(4): 223-237.
2. Carey RM, Moran AE, Whelton PK. Treatment of Hypertension: A Review. JAMA, 2022 Nov 8; 328(18): 1849-1861.
3. Nguyen Q, Dominguez J, Nguyen L, Gullapalli N. Hypertension management: an update. Am Health Drug Benefits, 2010 Jan; 3(1): 47-56.
4. Pathak A, Poulter NR, Kavanagh M, Kreutz R, Burnier M. Improving the Management of Hypertension by Tackling Awareness, Adherence, and Clinical Inertia: A Symposium Report. Am J Cardiovasc Drugs, 2022 May; 22(3): 251-261.
5. Gupta R, Guptha S. Strategies for initial management of hypertension. Indian J Med Res, 2010 Nov; 132(5): 531-42.
6. Carey RM, Muntner P, Bosworth HB, Whelton PK. Prevention and Control of Hypertension: JACC Health Promotion Series. J Am Coll Cardiol, 2018 Sep 11; 72(11): 1278-1293.
7. Pirasath S, Kumanan T, Guruparan M. A Study on Knowledge, Awareness, and Medication Adherence in Patients with Hypertension from a Tertiary Care Centre from Northern Sri Lanka. Int J Hypertens, 2017; 2017: 9656450.
8. Machaalani M, Seifeddine H, Ali A, Bitar H, Briman O, Chahine MN. Knowledge, Attitude, and Practice Toward Hypertension Among Hypertensive Patients Residing in Lebanon. Vasc Health Risk Manag, 2022 Jul 13; 18: 541-553.
9. Tausif, A., Sharma, T., Ahmad, S., Bala, S., & Kalra, J. (2019). The study of awareness and adherence in patients receiving anti-hypertensive drugs: a hospital based study. *International Journal of Basic & Clinical Pharmacology*, *8*(7): 1634–1639.
10. Pirasath S, Sundaresan T. Descriptive cross-sectional study on knowledge, awareness and adherence to medication among hypertensive patients in a tertiary care center, Eastern Sri Lanka. *SAGE Open Medicine*, 2021; 9.
11. Giakoumidakis K, Patelarou E, Brokalaki H, Bastaki M, Fotos NV, Ifantopoulou P, Christodoulakis A, Chatziefstratiou AA, Patelarou A. Patient Knowledge, Medication Adherence, and Influencing Factors: A Cross-Sectional Study among Hypertensive Patients in Greece. *Healthcare*, 2024; 12(9): 916.
12. Das, Alak & Lahiri, Gautam & Bose, Aaheli & Sarkar, Dipak. (2020). Assessment of patients' knowledge, attitude and practice regarding hypertension in a tertiary care hospital. International Journal Of Community Medicine And Public Health, 7: 4967.