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Assessment Of Knowledge, Attitude, And Practices Regarding Hypertension Management Among Patients In A Tertiary Care Teaching Hospital

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Abstract:

This cross-sectional study assesses patients' knowledge, attitudes, and behaviors (KAP) on managing hypertension at a teaching hospital for tertiary care in Bhawani Patna, Odisha. Utilizing standardized questionnaires, 220 hypertension patients—91 men and 129 women—were evaluated. Important demographic variables, antihypertensive drug types administered, and gender variations in KAP scores were all examined in this study. The findings indicate that the KAP scores of male and female patients varied significantly. Female patients showed considerably better attitudes toward dietary adjustments, such as salt restriction, and were more rigorous in following to frequent follow-up care, even though male patients knew more about the dangers of hypertension (60.4% vs. 38.4%). Comparing follow-up practices (93.2% vs. 77.8% for males) and salt restriction (88.2% vs. 72.8% for males), women shown a higher level of commitment, suggesting a more practical approach to controlling hypertension. The survey also showed that, in line with current treatment preferences, the most often prescribed drugs were calcium channel blockers (89%) followed by ACE inhibitors (46%) and β-blockers (36.4%). These results highlight how crucial it is to take gender-specific strategies into account when improving hypertension management. Patient outcomes and long-term hypertension control in men and women could be considerably improved by customized educational programs and interventions that address behavioral as well as knowledge-related issues.

Keywords: ***Knowledge, Attitude, and Practices (Kap), Tertiary Care Teaching Hospital, Hypertension Management, Hypertensive Patients, Salt Restriction, Dietary Modifications.***

Introduction:

Commonly referred to as hypertension, hypertension is a dangerous and widespread medical condition that affects people worldwide. The primary characteristic of this chronic condition is a continuously increased circulatory strain over time. The main component of a pulse is the force that the blood applies to the walls of the vessels as a result of the

heart's pumping blood throughout the body. When this strain is estimated, two statistics are often recorded: the diastolic tension, which reflects the strain when the heart is relatively still between pulsates, and the systolic tension, which addresses the strain when the heart contracts and siphons blood. We estimate the systolic strain in millimeters of mercury (mmHg).

Typically, a pulse reading between 120 and 80 mmHg is deemed acceptable. The diagnosis of hypertension is made, however, when the patient's circulatory strain remains consistently greater than this level. There are two main forms of hypertension that are commonly known: essential hypertension and secondary hypertension. The most common form of hypertension, known as primary hypertension, often develops slowly over a number of years with no apparent cause. Secondary hypertension, in contrast, is caused by known medical issues such kidney illness, hormone imbalances, or substance abuse.

The onset of hypertension is determined by a complex interplay of numerous variables. A significant risk factor is advanced age because of the correlation between the two conditions and high blood pressure. People with a history of hypertension in their family are also more likely to develop the condition. Elevated blood pressure levels are caused by a number of factors, including smoking, obesity, heavy alcohol consumption, salt intake, and lack of physical activity. Lifestyle factors have a major role in the onset of hypertension. Diabetes and renal disease are two chronic conditions that can cause individuals' blood pressure to rise.

Literature Review:

Gong et al. (2020) examined the sociodemographic characteristics as well as the knowledge, attitudes, and behavioral patterns (KAB) pertaining to hypertension of local residents in Shanghai, China who were at risk for the illness. A cross-sectional study involving 611 individuals at risk of hypertension was carried out in a Shanghai region in 2017 using multi-stage bunch evaluating. In order to examine KAB's efforts to lower blood pressure, surveys were employed. To investigate the relationship between the KAB associated with hypertension and sociodemographic variables, a multivariable computed relapse evaluation was conducted. The findings revealed that although 48.4% of the review population was aware of the Suggested Daily Intake of salt for adults, over 75% of the participants had correct information about the topic, over 80% had defined wellness beliefs, and less than half were adhering to a healthy diet, engaging in regular physical activity, or possibly managing their body weight. In comparison to the ≥70 age bunch, higher information levels were discovered in the age bunches ≤ 60 ($p < 0.01$) and 60-69 ($p = 0.03$). Women were judged to have better behavior than men ($p < 0.01$), and those covered by the New Country Helpful Clinical Protection ($p = 0.01$) shown superior direct behavior over those covered by the Metropolitan Representative Essential Clinical Protection. In conclusion, a high degree of

accurate information and belief on the prevention of hypertension was demonstrated by the study population; nevertheless, the rates of maintaining healthy habits were relatively low. Sociodemographic factors had a substantial impact on the KAB linked to hypertension. More health education and interventions in the prevention of hypertension were needed in order to raise the KAB level of the target groups and reduce their risk of hypertension.

Wake et al. (2020) Four hundred adults with hypertension who were on follow-up treatment at four public hospitals in the Arsi Zone, Oromia Regional State, Ethiopia, were surveyed cross-sectionally. Patients' information was gathered from in-person interviews with pre-tested questionnaires between March 10 and April 8, 2019, with supplementary data derived from reviews of their previous medical records. This study made use of SPSS version 21.0 for its data analysis. Out of 400 people who were asked to take part in the study, 97.6% actually did so. The participants' ages ranged from 23 to 90, with 49 being the median. There were 225 men, or 56.3%, in attendance. Over two-thirds (282, or 70.5% of the total) were of Oromo ethnicity, and the majority (160, or 40%) were married. Of those, 206 (51.5%) had completed elementary education.

Bogale et al. (2020) aimed to improve this demographic's understanding, attitude, and implementation of lifestyle change strategies, we need to work together. 274 hypertensive patients participated in a cross-sectional study that ran from March 1, 2019, to May 30, 2019, at Hiwot Fana Specialized University Hospital. To gather information, interviews were carried out using the structured questionnaire that had been pilot tested beforehand. The statistical package SPSS version 20 was used for the data analysis. Identifying independent variables related to hypertension patients' awareness and adoption of lifestyle adjustments was the goal of building a multivariate logistic regression model. Despite the low level of practice in this study, there was generally good knowledge and attitudes regarding the lifestyle adjustments that are advised for hypertension management.

Roy et al. (2021) established the SMBP protocol for patients with hypertension in nine community health centers located in three different states. Patients completed questionnaires both before and after the protocol was put into place to assess their understanding of and participation in managing their disease, as well as their opinions and experiences with SMBP. Patients' attitudes and views regarding SMBP were evaluated by means of sixteen questionnaire items. These consisted of a series of open-ended questions regarding their experiences with SMBP, binary questions about how well they thought they could follow specific SMBP rules, and 5-point Likert scale questions. Pre-questionnaire completion rates were 478 for patients and post-questionnaire completion rates were 372 for patients. 77% of participants recognized their ideal blood pressure after completing the training, and their involvement with blood pressure

regulation significantly improved (p=0.0024). In addition, 85% of participants reported that SMBP was easy to use. Open-ended responses from patients revealed the reasons for their decision to join SMBP as well as the parts of the program they enjoyed. If provided the proper guidance and support, patients in community health centers can perform accurate self-management practice (SMBP). Our study demonstrates that health center patients can safely take their blood pressure at home and follow thorough SMBP protocols, both of which are critical components of their treatment regimen, particularly in pandemic days.

Boyd et al. (2021) looked over the guidelines for managing and monitoring masked hypertension (MHT). However, data on primary care physicians' (PCPs') knowledge, comprehension, and attitudes toward MHT is lacking, and only a small percentage of PCPs actually screen for the condition. Thirty primary care physicians from three different New York hospitals participated in three focus groups. Through the use of thematic content analysis, the transcripts of the focus groups were reviewed. Only two doctors had diagnosed MHT, and opinions on the subject were all over the map. On top of that, the frequency and effects of MHT remained unknown. After hearing about the need of MHT screening, some primary care physicians were open to the idea, while others felt there wasn't enough data to modify their practices just yet. Until more evidence became available, providers were hesitant to add another screening test to their workload and were uncomfortable classifying patients without elevated office blood pressure (BP) as hypertensive. The usefulness of screening for MHT via home blood pressure monitoring has been the subject of some controversy. Although ambulatory blood pressure monitoring (ABPM) was more reliable for MHT screening, it was also thought to be the most accessible method. There was a lot of support for the concept of changing MHT's lifestyle. In order to dispel fears about antihypertensive drugs' possible side effects, randomized studies were required.

Research Methodology:

1. Research Design:

In order to evaluate patient knowledge, attitudes, and practices (KAP) regarding hypertension therapy in a tertiary care teaching hospital, this study uses a cross-sectional research methodology. The study looks at gender's impact on KAP scores, commonly prescribed anti-hypertensive drugs, and demographic traits. Quantitative analysis is used to find trends in patient behavior and the management of hypertension.

2. Research Area:

The study was carried out in Bhawani Patna, which is in the Odisha district of Kalahandi. A good place to examine hypertension management in a hospital environment is Bhawani Patna, a major urban hub in the area with a population that frequently uses tertiary healthcare facilities.

3. Data Collection:

At a tertiary care teaching hospital in Bhawani Patna, hypertension patients were given structured questionnaires to

complete in order to gather data. The purpose of the questionnaire was to collect data on demographics, KAP related to the management of hypertension, and the kinds of anti-hypertensive drugs that were prescribed. Information was also kept on the patients' work and educational backgrounds, as well as the length of the illness and treatment. To enable gender-based comparisons of KAP scores, the study made sure that both male and female patients were included.

4. Sample Size:

A sample of 220 hypertension patients—91 men and 129 women—were included in the study. In order to ensure adequate representation for statistically meaningful analysis, the sample size was established using the hospital's outpatient data for hypertension during a specified time period.

Data Analysis:

Table 1: Features of hypertension patients' demographics.

Demographic Data	Mean/Percentage	n (Number of Patients)
Age (years)	60.6 ± 15.2	-
Sex		
- Male	45.60%	91
- Female	69.40%	129
Education		
- Illiterate	20.50%	47
- High school	64%	118
- College	37.40%	65
Employment Status		
- Employed	70.30%	131
- Unemployed	5%	8
- Homemaker	746.50%	75
Duration of Disease (years)	6.9 ± 4.0	-
Duration of Treatment (years)	6.7 ± 3.9	-

The demographic data shows that the patients' average age is 60.6 years, suggesting an older population. A range of age groups is shown by the standard deviation of ±15.2 years. The distribution of sexes is 45.6% male (n = 91) and 69.4% female (n = 129); however, this number is more than 100%, indicating a mistake that has to be fixed. The patients' educational backgrounds vary, with 64% (n = 118) having completed high school, 37.4% (n = 65) having attended college, and 20.5% (n = 47) being illiterate. The employment status of the patients indicates that 131 of them, or 70.3%, are employed, and 75 of them, or 36.5%, are homemakers; however, the percentage of homemakers needs to be revised because it seems to be

off. Furthermore, 5% of patients (n=8) do not have a job. With an average treatment duration of 6.7 years, patients had been managing their hypertension for a long time, indicating long-term disease control in this group. In general, the information suggests that the population is older, better educated, engaged in the workforce, and has a great deal of expertise controlling their hypertension. For a more accurate analysis, it is necessary to address certain anomalies in the data, especially those related to the employment and sex percentages.

Table 2: Frequently administered antihypertensives

Medication Type	Percentage (%)
Calcium Channel Blockers	89%
β Blockers	36.40%
ACE Inhibitors	46%
Diuretics	10%
ARBs	5.60%

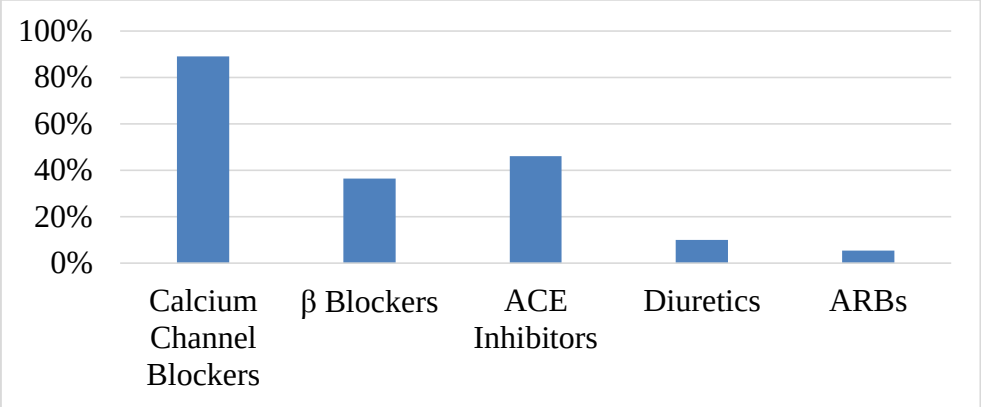

Figure 1: Graphical representation of Frequently administered antihypertensives

The prescription patterns of anti-hypertensive drugs are shown in Table 2, where calcium channel blockers (CCBs) are the most commonly prescribed medication (89%). This suggests that CBs are effective in controlling hypertension and have a positive side effect profile. Comparatively, ACE inhibitors and β-blockers are given less frequently (36.40% and 46%, respectively), most likely as a result of patient-specific characteristics such treatment objectives and comorbidities. The least prescribed medications are diuretics (10%) and angiotensin receptor blockers (ARBs) (5.60%), which may indicate a move toward more sophisticated treatments. All things considered, these results provide important new information about treatment preferences and underscore the significance of customized pharmacological strategies for maximizing hypertension control.

Table 3: Gender comparison of KAP scores

Gender	Knowledge about Complications of Hypertension (%)	Attitude towards Diet and Salt Restriction (%)	Practice of Regular Follow-up (%)	Practice of Salt Restriction (%)
Male	60.40%	8.90%	77.80%	72.80%
Female	38.40%	34.30%	93.20%	88.20%
p-value	<0.01**	<0.01**	<0.001*	<0.001*

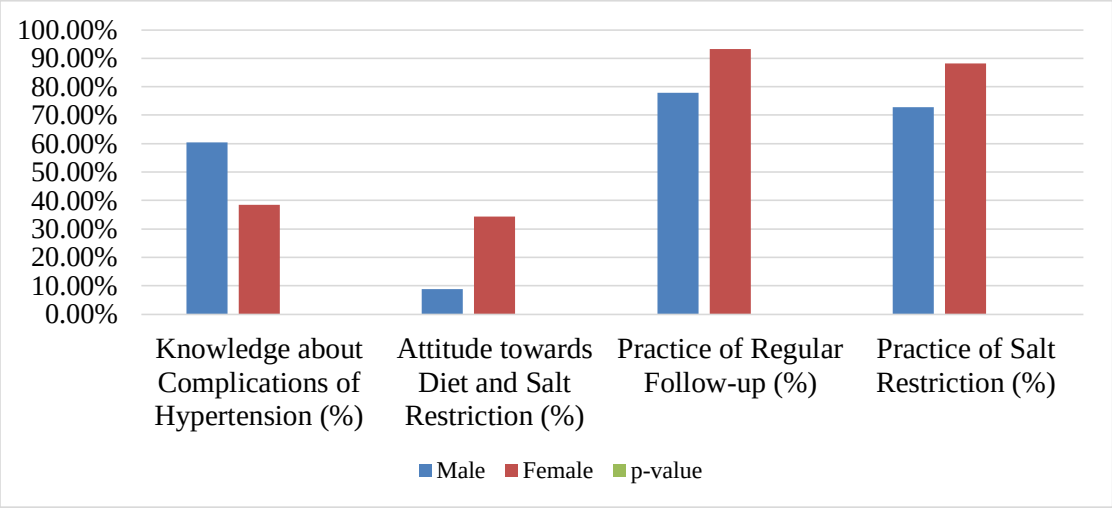

Figure 2: Graphical representation of Gender comparison of KAP scores

The Knowledge, Attitude, and Practice (KAP) scores for male and female patients with relation to the management of hypertension are contrasted in Table 3. According to the findings, men are more knowledgeable than women about the consequences of hypertension, knowing 60.40% versus 38.40%. Nonetheless, females show stronger behaviors in regular follow-up (93.20% against 77.80%) and salt restriction (88.20% compared 72.80%), as well as much better attitudes about diet and salt restriction (34.30% versus 8.90%). The p-values show statistically significant variations in each category, emphasizing the role that gender plays in determining KAP ratings. These results imply that although men may know more about hypertension, women are more dedicated to following up with care and following a healthy diet, both of which are essential for managing hypertension effectively. Figure 2 provides a visual representation of these discrepancies, which helps to clarify how gender affects patient variations in KAP scores.

CONCLUSION:

The study presents important findings about patients' knowledge, attitudes, and practices (KAP) about managing their hypertension in a teaching hospital that provides tertiary care. The bulk of patients, according to the demographic research, are older, well-educated, employed, and have a history of managing their hypertension. Males had much higher knowledge of the problems of

hypertension, but females have significantly better attitudes toward dietary adjustments and stronger adherence to follow-up treatment and salt restriction practices. These gender disparities are reflected in the noteworthy differences in KAP scores. These results highlight the significance of gender-specific approaches to the management of hypertension and highlight the necessity of customized behavioral and educational interventions to enhance outcomes for patients of both sexes. Furthermore, the examination of prescriptions for anti-hypertensive drugs indicates a predilection for calcium channel blockers, indicating a dependence on specific drug classes for efficient treatment. Healthcare professionals can use the study's insightful recommendations to improve treatment strategies and encourage patient participation in their hypertension management.

REFERENCES:

1. Gong, D., Yuan, H., Zhang, Y., Li, H., Zhang, D., Liu, X., ... & Li, C. (2020). Hypertension-related knowledge, attitudes, and behaviors among community-dwellers at risk for high blood pressure in Shanghai, China. International Journal of Environmental Research and Public Health, 17(10), 3683.
2. Wake, A. D., Bekele, D. M., & Tuji, T. S. (2020). Knowledge and attitude of self-monitoring of blood pressure among adult hypertensive patients on follow-up at selected public hospitals in Arsi Zone, Oromia Regional State, Ethiopia: A cross-sectional study. Integrated blood pressure control, 1-13.
3. Bogale, S., Mishore, K. M., Tola, A., Mekuria, A. N., & Ayele, Y. (2020). Knowledge, attitude and practice of lifestyle modification recommended for hypertension management and the associated factors among adult hypertensive patients in Harar, Eastern Ethiopia. SAGE Open Medicine, 8, 2050312120953291.
4. Roy, D., Meador, M., Sasu, N., Whelihan, K., & Lewis, J. H. (2021). Are community health center patients interested in self-measured blood pressure monitoring (SMBP)–and can they do it? Integrated Blood Pressure Control, 19-29.
5. Boyd, R., Carter, E., Moise, N., Alcántara, C., Valadares, T., Anstey, D. E., & Kronish, I. M. (2021). Awareness, knowledge, and attitudes toward screening and treatment of masked hypertension in primary care. American Journal of Hypertension, 34(12), 1322-1327.
6. Kurnia, A. D., Melizza, N., Ruhyanudin, F., Masruroh, N. L., Prasetyo, Y. B., Setyowati, C. I., & Khoirunnisa, O. (2022). The Effect of Educational Program on Hypertension Management Toward Knowledge and Attitude Among Uncontrolled Hypertension Patients in Rural Area of Indonesia. Community Health Equity Research & Policy, 42(2), 181-188.
7. Abdalla, A. A. (2021). Knowledge, attitude and practice towards therapeutic lifestyle changes in the management of hypertension in

Khartoum State. Cardiovascular Journal of Africa, 32(4), 198-203.

8. Mohammed, A. H., Hassan, B. A. R., Suhaimi, A. M., & Ali, A. H. H. D. (2021). Hypertension knowledge, awareness, and attitude among the hypertensive population in Kuala Lumpur and rural areas in Selangor, Malaysia. Journal of Public Health, 29, 443-450.
9. Munyungula, J., & Shakwane, S. (2021). Self-monitoring of blood pressure for preeclampsia patients: knowledge and attitudes. curationis, 44(1), 2195.
10. Ralapanawa, U., Bopeththa, K., Wickramasurendra, N., & Tennakoon, S. (2020). Hypertension knowledge, attitude, and practice in adult hypertensive patients at a tertiary care hospital in Sri Lanka. International Journal of Hypertension, 2020.
11. Sefah, B., Onyame, A., Ankrah, C., Tetteh, P. A., & Nutornutsi, M. D. (2021). Knowledge, attitude and lifestyle practices pertaining to hypertension among the people of Ahoe-Ho. J Hypertens Manag, 7(1), 061.
12. Dash, S., Delibasic, V., Alsaeed, S., Ward, M., Jefferson, K., Manca, D. P., & Arcand, J. (2020). Knowledge, attitudes and behaviours related to physician-delivered dietary advice for patients with hypertension. Journal of Community Health, 45, 1067-1072.
13. Villarino, R. T., Arcay, C. A., Temblor, M. C., Villarino, M. L., Bagsit, R., Ocampo, L., & Bernard, P. (2021). The effects of lifestyle intervention using the modified beliefs, attitude, subjective norms, enabling factors model in hypertension management: Quasi-experimental study. JMIR cardio, 5(2), e20297.
14. Machaalani, M., Seifeddine, H., Ali, A., Bitar, H., Briman, O., & Chahine, M. N. (2022). Knowledge, attitude, and practice toward hypertension among hypertensive patients residing in Lebanon. Vascular Health and Risk Management, 541-553.
15. Sorato, M. M., Davari, M., Kebriaeezadeh, A., Sarrafzadegan, N., Shibru, T., & Fatemi, B. (2021). Reasons for poor blood pressure control in eastern sub-Saharan Africa: looking into 4P's (primary care, professional, patient, and public health policy) for improving blood pressure control: a scoping review. BMC cardiovascular disorders, 21, 1-15.