



Research Article

Study on the knowledge, attitude and practice (KAP) of patients with hypertension in Aseer hospital, Asir region; Saudi Arabia

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ABSTRACT

The objective was to assess the level of Knowledge, Attitude and Practice of patients who suffer from Hypertension. A prospective cross-sectional survey was conducted on a sample size of 130 Hypertensive patients of both the genders enrolled by simple random sampling technique admitted in the Aseer Central Hospital of Abha during the period from October 2016 to December 2016. Altogether 130 hypertensive patients were enrolled in this study with equal no. of Males and Females. Most of the respondents were aged between 18-40 years (45%). On assessing the KAP of the patients we found that the Knowledge and Attitudes score was good but the Practices scores were moderate in both the genders. Our study concludes that a significant proportion of hypertensive patients show less Practice towards the disease management which can lead to severe complications in time being and also result in damage of other vital organs. So there is a need of intense educational intervention for the patients. Patient counseling by the clinical pharmacist can play a vital role in imparting education to the hypertensive patients. Strategies to modify lifestyle which help in control of hypertension can include providing leaflets as well as direct educational programs.

Key words: Hypertension; Knowledge; Attitude; Practices

INTRODUCTION

Hypertension is the silent killer disease which remains asymptomatic until the damage effect of it can be seen. It is an important and common risk factor for considerable morbidity and mortality.¹

Definition of Hypertension: It is a condition in which the person has a systolic blood pressure (SBP) of about 140 mm Hg or more than that and a diastolic blood pressure (DBP) of about 90 mm Hg or more.² A study conducted on the prevalence of hypertension report that 972 million people in the world are suffering with this problem. Incidence rate of hypertension range between 3% and 18% depending on the age, gender, ethnicity and body size of the population studied.³

In Saudi Arabia hypertension affects a sizeable enough proportion of the population and it is obvious that it is a prevalent risk factor in Saudi Arabia. The urban population showed significantly higher prevalence of hypertension of 27.9%, compared to rural population's prevalence of 22.4%.⁴

Impact of Hypertension: Effects of high blood pressure can be seen on the following organs like Heart; Brain; Kidneys.⁵

Despite these features, the magnitude and epidemiological characteristics of this disease have been rarely studied in Saudi Arabia. To fill this gap, a survey was conducted in south-western Saudi Arabia to study the KAP of hypertension, among a number of other important health conditions.

What are KAP Study and its Significance?

- KAP study shows that what people know about certain things, about their feelings and behaviors towards the disease management.
- The Knowledge, Attitude and Practice are the crucial factors which are characterized by interdependence uniquely.
- It serves as an educational diagnosis of the community.
- It suggests that an improvement in the knowledge and Attitudes towards disease management can reform the kinds

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of practices which are followed regarding management of disease.⁹

So as we know that there are several complications due to Hypertension and its incidence is also increasing day by day so it is necessary that more attention should be directed towards better control of the disease and towards studying and enhancing compliance. Improving the KAP of the patients regarding the disease and drugs can improve the medication adherence behavior, enhances compliance as well as which in turn improves the therapeutic outcomes and this can be done by many ways including group education as well as through patient counseling. Thus, this study will explore the potential role of the pharmacist as a patient educator in the management of hypertension.

OBJECTIVE

- To assess the level of **knowledge, attitude** and **practice** of patients who suffer from high blood pressure.
- To improve the Quality of life of patients.

METHODOLOGY

The region of Aseer, with a population of 1,200,000, covers more than 80 000 km² in south-western Saudi Arabia. Sharing its border with Yemen, the area extends from the high Asir mountains about 3200 m above the sea level down to the Red Sea. About Forty-four semi-urban and rural small villages and areas have found to be spread around Abha, the capital of the region.

Method of Data Collection:

- **Study design, Source of Data and Study setting:** A prospective cross-sectional survey was conducted on the inpatients admitted in the Aseer Central Hospital of Abha.
- **Sample Size & Technique:** A sample size of 130 Hypertensive patients of both the gender were enrolled in this survey. The subjects were included by Simple random sampling technique in this study.
- **Sampling Criteria:** Inclusion Criteria:
 - i. Inpatients from all the departments suffering with hypertension.
 - ii. Patients of age 18 years and above of both the genders.

Exclusion Criteria: Pregnant women and children.

Collection of Data:

1. A prior formal permission was obtained from Aseer Central Hospital authorities of Abha for collecting the required data.
 2. Informed consent was also obtained from the patients.
 3. A Structured questionnaire was administered to collect the data regarding knowledge, attitude and practice of lifestyle modification.
 4. Duration of data collection was about 3 months from October 2016 to December 2016.
- **Variables under Study:** Independent Variable: In this study the independent variables included are the demographic variables like age, sex, family history, habits.

Dependent Variables: The dependent variables taken under consideration in this study are Knowledge, Attitude and Practice.

- **Tool of Research:** An Appropriated structured and validated questionnaire was used to carry out this study. This questionnaire consisted of 2 sections;

Section A: It included details about the demographic variables of the subject.

Section B: It included the structured questionnaire regarding Knowledge, Attitude & Practice.

METHODS OF DATA ANALYSIS

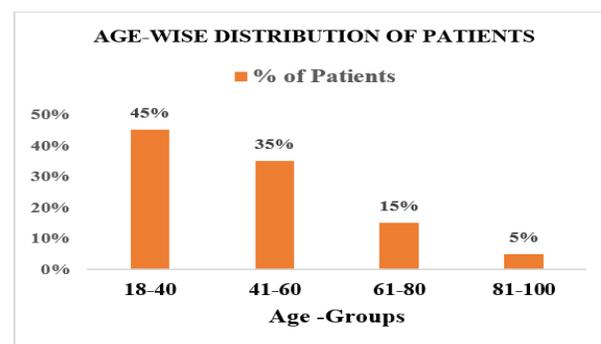
A descriptive statistical analysis method was used in order to compare the KAP in different demographic details, where as inferential statistics were also used to show the statistical significance between the dependent variables.

A 2-way anova method was used to calculate the Mean and Standard Deviation.

RESULTS AND DISCUSSION

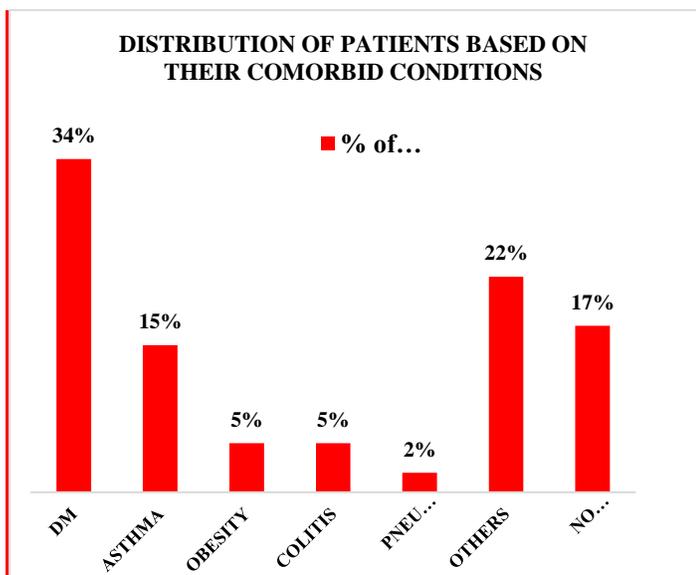
- It was found that on comparison of the Knowledge in different genders that Knowledge mean score was about 5.533 (± 1.873) in males and 5.767 (± 1.661) in Females from the total score of 8. Females had a slightly better knowledge (51%) when compared to the Males (49%) but not with much significant difference.
- The Attitude mean score was about 7.983 (± 1.359) in Males where as 7.450 (± 1.712) in Females out of the total score of 9. So Attitude was found to be slightly higher in Males (52%) when compared to Females (48%).
- The Practice score was about 12.317 (± 7.448) in Males whereas 14.183 (± 7.557) in Females. The questions related to Practice were answered slightly better (54%) in Females when compared to the males (46%).

The values were subjected to 2 way anova analysis and it was found that the p value was 0.2879 i.e greater than 0.05 (Alpha <0.05), which concludes that there is no significant difference between the KAP score among the different gender. We found that out of the total 130 study participants the Knowledge,

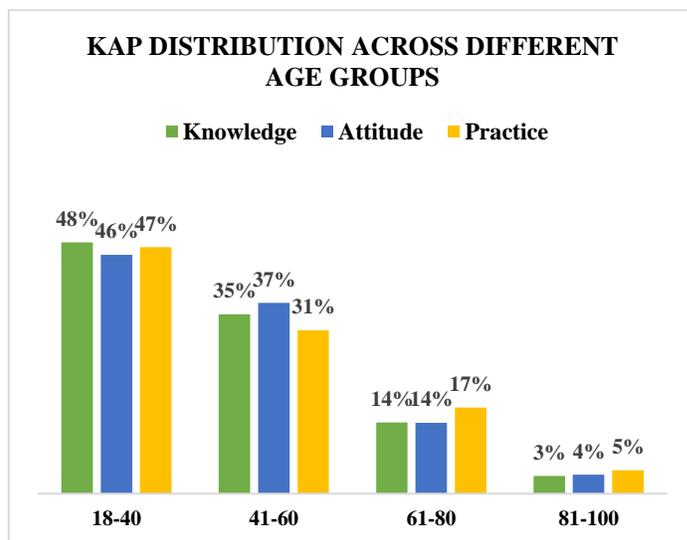


Graph 1: Age-wise distribution of patients

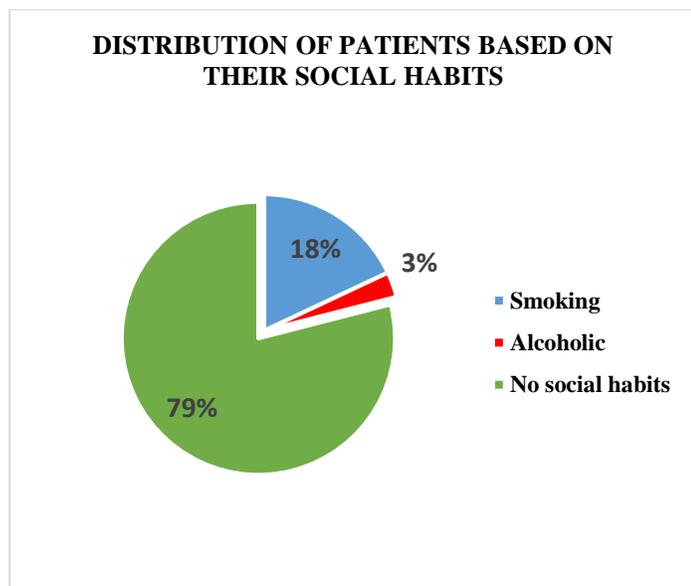
Attitudes score was good but the Practices scores were moderate in both the genders from a total score of 8,9,25 respectively.



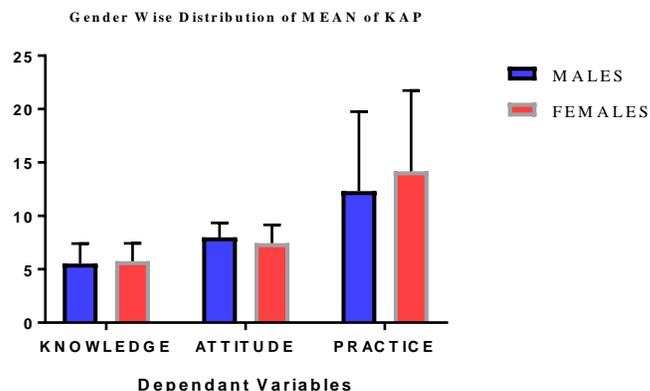
Graph 2: Distribution of patients based on their comorbid conditions



Graph 4: KAP distribution across different age groups



Graph 3: Distribution of patients based on their social habits



Graph 5: Gender wise distribution of MEAN of KAP

Table 1: Gender wise distribution of MEAN and SD of KAP

Dependent Variables	N	Males		Females	
		MEAN	SD	MEAN	SD
Knowledge	65	5.533	1.873	5.767	1.661
Attitude	65	7.983	1.359	7.450	1.712
Practice	65	12.317	7.448	14.183	7.557

- According to our findings, Patient's knowledge score was found to be good which was similar to the result of the study conducted by Oliveria et al in India.
- But a different result was observed in the study conducted by O.A. Busari et al in Nigeria which showed that the participants had a poor knowledge.

- Whereas the Patient's Attitude mean score was found to be good in both the genders which was similar to the study conducted by Bong YJ et al where the study participants had good attitude score. But our results did not match with the results of the study conducted by Oliveria et al which stated that the patients had good knowledge but their attitude was less.
- Patient's practice score was moderate but in a study conducted by Bollu M et al in India indicated that the study participants in their study scored low in Attitude and Practice.
- The difference in the findings among different studies may be due to the differences in the literacy of the study patients, the training received by them and availability of information on hypertension.

CONCLUSION

Our study concludes that a significant proportion of hypertensive patients have good knowledge and Attitude towards hypertension but they show moderate levels of Practice which can lead to worsening their health condition in time being and resulting in severe complications and damaging of other vital organs also. So there is a need of intense educational intervention for the patients.

- Motivation and counseling stressing the importance of lifestyle modifications and self-management is required for the patients suffering with chronic diseases like hypertension.
- Patient counseling by the clinical pharmacist can play a vital role in imparting education to the hypertensive patients.
- Strategies to modify lifestyle which help in control of hypertension can include providing the leaflets as well as direct educational programs.
- There is a need of pharmaceutical care program to increase the patients understanding about the disease management and to enhance the knowledge of the patients regarding the importance of regular BP checkup is essential so that they can Practice well which can in turn improve their Quality of life in future years.

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REFERENCES

1. RJ Sinha. [A Study to assess the Knowledge and Attitude of the Hypertensive Patients Regarding Preventive Strategies for Coronary Heart Disease]. Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka, India: 2012-2014.
2. Markus MG. Hypertension: Causes, Symptoms and Treatments. Medical News Today. 2016 Apr 18:1.
3. Hajjar I, Kotchen JM, Kotchen TA. Hypertension: Trends in Prevalence, Incidence, and Control. *Annu. Rev. Public Health* 2006. 27:465–90 doi: 10.1146/annurev.publhealth.27.021405.102132
4. Al-Nozha MM, Abdullah M, Arafah MR, Khalil MZ, Nazeer BK, Al Mazrou TY, et al. Hypertension in Saudi Arabia *Saudi Med J* 2007; Vol.28(1):77-84.
5. Effects of High Blood Pressure. CDC 24/7; 2016 July 26. Available from: <https://www.cdc.gov/bloodpressure/effects.htm/>.
6. Risk factors, Diseases and Conditions, High blood pressure (hypertension). Mayo Clinic. June 09, 2011. Available from: <http://www.mayoclinic.org/diseases-conditions/high-blood-pressure/basics/risk-factors/con-20019580/>.
7. Markus MG. Hypertension: Causes, Symptoms and Treatments. Medical News Today. 2016 Apr 18:2.
8. Causes, Diseases and Conditions, High blood pressure (hypertension). Mayo Clinic. June 09, 2011. Available from: <http://www.mayoclinic.org/diseases-conditions/high-blood-pressure/basics/causes/con-20019580/>.
9. Biradar SS, Rajashekhar K, Srinivas R, Raju SA. Role of pharmacist towards KAP in compliance with hypertension in North Karnataka in South Indian city a brief overview. *Int Res J Pharm* 2012; 3(5): 17-20.
10. Kaliyaperumal K, Vol. IV, No.1, Jan - Mar 2004. Available from: http://v2020eresource.org/content/files/guideline_kap_Jan_mar04.pdf
11. Bollu M et al. Study of knowledge, attitude, and practice of general population of guntur toward silent killer diseases: hypertension and diabetes. *AJPCR*. 2015; 8(4).
12. Parmar P, Rathod GB, Rathod S, Goyal R, Aggarwal S, Parikh A. Study of knowledge, attitude and practice of general population of Gandhinagar towards hypertension. *Int J Curr Microbiol Appl Sci* 2014; 3(8): 680-5.
13. Shankar S et al. Knowledge, Attitude and Practice of Hypertension among Adult Hypertensive Patients at a Rural Clinic of Coastal Karnataka. *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)* e-ISSN: 2279-0853, p-ISSN: 2279-0861. Volume 13, Issue 12 Ver. II (Dec. 2014), PP 33-35.
14. Demaio AR, Otgontuya D, de Courten M, Bygbjerg IC, Enkhtuya P, Meyrowitsch DW, et al. Hypertension and hypertension-related disease in Mongolia; Findings of a national knowledge, attitudes and practices study. *BMC Public Health* 2013; 13: 194.
15. Mahajan H, Kazi Y, Sharma B, Velhal GD. Assessment of KAP, risk factors and associated co-morbidities in hypertensive patients. *IOSR J Dent Med Sci* 2012; 1(2): 6-14.
16. Shaikh MA, Yakta D, Sadia Khan, Kumar R. Hypertension knowledge, attitude and practice in adult hypertensive

- patients at LUMHS. *J Liaquat Univ Med Health Sci* 2012; 11(2): 113-6.
17. Fakhri S, Sima B, Homayoon N, Akbar HZ. Knowledge, awareness, attitude and Practice about Hypertension in hypertensive patients referring to public health care centers in Khor and Biabanak. Iran *J Nurs Midwifery Res*. 2011 Winter; 16(1): 34-40.
 18. Busari OA, Olanrewaju TO, Desalu OO, Opadijo OG, Jimoh AK, Agboola SM, et al. Impact of patients' knowledge, attitude and practices on hypertension on compliance with antihypertensive drugs in a resource-poor setting. *TAF Prev Med Bull* 2010; 9(2): 87-92.
 19. Bong YJ et al. A cross sectional study on the levels of Knowledge, attitudes and preventive practices of Hypertension among residents aged 18 years and above in Kampung Baru Ixora, Sarikei. UNIMAS, 2006.
 20. Oliveria SA, Chen RS, McCarthy BD, Davis CC, Hill MN. Hypertension knowledge, awareness, and attitudes in a hypertensive population. *J Gen Intern Med* 2005; 20(3): 219-25.
 21. Sengwana MJ, Puoane T. Knowledge, beliefs and attitudes of community health workers about hypertension in the Cape Peninsula, South Africa. *Curatiosis* 2004; 27(1): 65-71.
 22. Cielecka- Piontek J, Styszynski A, Wieczorowska-Tobis K. Knowledge of Risk Factors for Hypertension in the Elderly. *New Medicine* 1/2004, s. 2-4. Available from: <http://www.czytelniamedyczna.pl/1000> [Last accessed on 2013 Oct 13].
 23. Alexander, M., Gordon, N. P., Davis, C. C. and Chen, R. S. (2003), Patient Knowledge and Awareness of Hypertension Is Suboptimal: Results from a Large Health Maintenance Organization. *The Journal of Clinical Hypertension*, 5: 254–260. doi:10.1111/j.1524-6175.2003.01963.x
 24. Van Rossum CT et al. Hypertension: Prevalence, Treatment, and Control of Hypertension by Socio-demographic Factors among the Dutch Elderly. 2000; 35:814-821. <https://doi.org/10.1161/01.HYP.35.3.814>.
 25. Gandeh, M. B. S, Milaat, W. A. Knowledge, attitude and practice of primary health care doctors and nurses in hypertension of pregnancy. *J Family Community Med*, 1999; 6(1): 35–44.
 26. Aubert L, Bovet P, Gervasoni JP, Rwebogora A, Waeber B, Paccaud F. Knowledge, attitudes, and practices on hypertension in a country in epidemiological transition. *Hypertension* 1998; 31(5): 1136-45.
 27. Viera AJ, Cohen LW, Mitchell CM, Sloane PD. High blood pressure knowledge among primary care patients with known hypertension: a North Carolina Family Medicine Research Network (NC-FM-RN) study. *J Am Board Fam Med*. 2008; 21(4): 300–8.
 28. Victor RG, Leonard D, Hess P, Bhat DG, Jones J, Vaeth PA, et al. Factors associated with hypertension awareness, treatment, and control in Dallas County, Texas. *Arch Intern Med*. 2008; 168(12): 1285–93.