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Review Article

ROLE OF PHARMACIST TOWARDS KNOWLEDGE ATTITUDE AND PRACTICE IN COMPLIANCE WITH HYPERTENSION IN NORTH KARANATAKA IN SOUTH INDIAN CITY A BRIEF OVERVIEW

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ABSTRACT
It is well known that the management of hypertension reduces the incidence further complications like myocardial infarction, stroke and vascular complications. Hypertension is a major health problem with individual, social and economical consequences. Knowledge, attitude and practice (KAP) surveys are important and effective in terms of providing baseline for evaluating intervention programmes**.** In this brief review the role of pharmacist in hypertension better understanding of knowledge attitude and practice towards disease management was assessed. The data cited in this brief review were mainly selected the articles from Medline/Pub Med. The articles associated with Hypertension and Knowledge attitude and practice were randomly selected.
The results obtained that pharmacological and non-pharmacological benefits can be achieved through the patient's understanding of disease, medications & lifestyle modification when the pharmacist provides them with useful practical information, particularly counseling to hypertension. Acknowledgment of the role pharmacist in hypertension would be conducive to better understanding the pathogenesis of hypertension, and provide new insight for improved treatment and prevention.
KeyWords: Knowledge, Attitudes, Practices, Hypertension.

INTRODUCTION

Hypertension, elevated blood pressure, is a noteworthy public health concern worldwide due to its significant contribution to the global health burden and its role as a prominent risk factor for the development of a number of disease processes. In the year 2001, high blood pressure accounted for 54% of stroke, 47% of ischemic heart disease, 75% of hypertensive disease, and 25% of other cardiovascular disease worldwide". The negative impact of hypertension on health status is clear, especially taking into account the disability, decreased quality of life, and mortality associated with stroke and cardiovascular disease. In 2001, 7.6 million deaths (13.5% of all deaths) and 92 million disability life-years (6% of total) were attributable to systolic blood pressure greater than 115 mmHg[1]. It is saddening to note that such pervasive negative effects are related to such a modifiable cause.

In response to a recognized need and new evidence-based suggestions, the World Health Organization released a revision of its statement on the management of hypertension. The WHO estimated that the condition accounted for 4.5% of the global disease burden and attributed the increase in hypertension to increasing contributing factors and coexisting cardiovascular risk factors such as obesity, poor diet, lack of physical activity, and smoking. Given the large scale and modifiable nature of the problem, it certainly merits the attention of the health care community[2].

Since time immemorial pharmacy as a profession has been accorded a place of consecration of the highest order, and those who profess it have been held as bearing a holy responsibility. It was practiced only by priests, the elite and the most trustworthy citizens; it being an immense value-laden profession. This ethical dimension continues to this day. The place of medicine lies somewhere between god's will to end life and His mercy, which encompasses cure or alleviation of human suffering, and before and during the struggle for health, knowledge is acquired and transmitted by the physician with efficiency and skill (practice) and blended with measures of wisdom, ethics and faith (attitude).

The purpose of KAP study is to explore changes in Knowledge, Attitude and Practices of the community, paramedical personnel (pharmacist) and medical practitioners on hypertension. This brief review will provide information for evaluation of the hypertension.

What is a KAP Study

The Knowledge, attitude and practice are the important factors characterized by dynamism and unique interdependence. It explains about improving the knowledge, changes in attitudes towards Disease management as well as changes in the kinds of practices that are followed regarding management of Disease. it is necessary to assess the environment in which awareness creation should take place. KAP Study shows that what people know about certain things, about their feelings and behavior. The three important components of the study measures are Knowledge, Attitude and Practice. The Knowledge gained by a community people refers to their understanding of any assigened topic, hypertension in this case. Attitude refers to their feelings towards this subject as well as any preconceived ideas that they may have towards it. Practice refers to the ways in which they demonstrate their knowledge and attitude through their actions.

While assessing the KAP of a community it is useful to divide that community into smaller Sub-categories. In this case, these categories can be defined as the Medical Community and the General Community. The Medical Community consists of those who are responsible for the provision of medical care to the population. It includes the doctors, paramedics, pharmaceutical providers and others. This category could be further split into Medical Practitioners and Paramedical Personnel in areas with a large enough

population of these two groups. The General Community consists of those who receive medical care. There are many reasons to expect that the levels of KAP will vary in these two categories. This fact should be kept in mind when awareness creation programmes are evolved for hypertension[3].

OPERATIONAL DEFINITIONS

Knowledge

It refers to the response to the items on hypertension as measured by knowledge questionnaire and expressed in terms of knowledge score i.e. high, moderate or poor**.**

Knowledge is the capacity to gain, retain and use information; a mixture of comprehension, experience, discernment and skill. The possession of knowledge requires complementarity between two basic ingredients; the concept through which an object is thought of at all, this requiring intellect; and the perception by which the concept is acquired, this requiring power of sense.

A type of knowledge tell about the different modes of acquiring of ideas; perception, imagination, memory, judgment, abstraction and reasoning. Knowledge criteria centre on the sense that allows us to distinguish between right path and wrong path as studied by logic (deductive reasoning) and scientific method (formulating and testing hypotheses). The aim of knowledge is the truth and is studied by that branch of metaphysics called as epistemology. Education is essential for knowledge. It is the raising of a population (child and adult) so that the acquiring the intellectual and manual skills and develops moral qualities and demonstrates to others good manners and behaviors.

STEPS IN INVOLVED IN KAP

KAP Research Protocols

A research protocol is a description that describes a methodology, that is, how a research study is designed, administered and analyzed. The basic elements of a KAP study include:

a. Domain identification.

The domain, or subject, which the study will be conducted on, must be identified. For the purposes of a diseases. The general domain area in the present study is hypertension, specifically the domains will be the Knowledge, Attitude and Practices of the population.

b. Question Preparation

Question preparation must be conducted in various stages. The first stage in preparing questions for a KAP study is to meet with physicians and community medicine doctors. This group of specialists should then identify the Endpoints or Goals of the awareness creation activities of the hypertension project for Medical practitioners, Paramedical personnel and other Community members. Questions should be prepared to test all three areas of the study, Knowledge, Attitude, and Practices.

Questions should cover the following topics:

- Epidemiology of hypertension
- Progress of hypertension
- Symptoms of hypertension
- Diagnosis of hypertension
- Treatment options for hypertension
- Risk factors for hypertension

Questions included in the Attitude section should be designed to gauge the prevailing attitudes, beliefs and misconceptions in the population about these diseases. This could be most effectively done using a different strategy. Statements should be provided and respondents should be asked to indicate the extent to which they agree with those statements on a pre-determined scale (strongly disagree, moderately disagree, neutral, moderately agree, strongly agree).

These questions should cover the following topics:

- Demography
- Follow-up procedure and importance
- Importance, significance and severity of hypertension
- Importance of referral
- Health seeking behavior

Questions included in the Practice section should be designed to assess the practices of the population with regard to the disease in question. These should be open-ended questions like those asked in the Knowledge section to prevent false information as a result of guessing. These questions should cover the following topics:

- Intervention
- Counseling services
- Referral practices
- Hypertension management

Continuing pharmacy Education (CPE)

Whereas pharmacist in involvement is very essential in the management of hypertension the present study was involved the pharmacist mediated patient counseling with hypertensive patients.

c Identification of the target audience.

The initial step involved in conducting a KAP study is the selection of the sample on which the survey will be done. The dividing of population has to be carried out into smaller categories is typically desirable, as different groups in a community have varying educational, cultural and socioeconomic backgrounds and therefore will likely have differing levels of KAP.

d. Determination of sampling methods.

A standard method for conducting the survey should be decided upon in advance and should be consistent for each category to ensure that differences in the result are independent of the sampling method and depend solely on the characteristics of the population in question. KAP sampling methods typically use a questionnaire through Interviews (in-person, phone, or mail).

e. Analysis and reporting.

KAP studies are very much like a standard social survey, although they are much more focused and limited in scope. KAPs are also uniquely tailored to a specific location, project, or problem. Therefore they collect the least amount of information to determine whether KAPs have changed from one time period to another. After collection, the data are analyzed to determine the KAP level of the target audience. In larger populations SAS, SPSS, Excel or other standard databases can be used to analyze and present KAP data. For smaller samples, Survey Monkey or a similar Internet-based program is ideal. Knowledge questions which often have more than one component to a "correct" answer must be analyzed differently from those in the Attitudes section, which must in turn be analyzed differently from those in the Practices section.

Reporting of findings is typically done in the presentation of descriptive statistics in table format for each section (knowledge, attitudes, and practices). A KAP report should include an introduction, study design, findings, analysis and conclusions. Format and distribution depends upon the terms of reference of the study as defined by the commissioning agency. Most KAP reports contain detailed frequency data and histograms with attributes of the surveyed population. Most also clearly track pre/post intervention knowledge, attitudes and practices over time.

Knowledge and practice on lifestyle modification of hypertension

The Efforts to control hypertension have included increasing public knowledge and awareness, especially about the risks associated with uncontrolled BP. A study in 1972, the National High Blood Pressure Education Program was launched to further the public's knowledge of hypertension and the seriousness of the condition.[3,4]

The reports of National Health and Nutrition Examination Survey (NHANES II and NHANES III) shows an increase in BP awareness during the time period 1976–1991 from 51% to 73%. 5 to 6 other studies have assessed hypertension knowledge and awareness in the general population with some, but not all showing a decreased level of knowledge and awareness. [4, 5, 7] The results shows the important to have access to patients' clinical BP data so that the relationship between their perception of factors, such as BP control and initial clinical BP can be measured and evaluated in the context of their clinical values.

In a study the Improvement in recognition of the importance of systolic blood pressure (SBP) has been identified as one of the major public health and medical challenges in the prevention and treatment of hypertension (JNC VI 1997)[6]. SBP is a strong independent risk factor for cardiovascular disease but no information is available on whether patients understand the importance of their SBP.[8-11] Further, a recent study looking at uncontrolled hypertension in the United States concluded that most cases of uncontrolled hypertension were related to mild systolic hypertension.[12] Recent reports have suggested that hypertension knowledge is related to BP control.[13] It is important to assess the extent to which patients are aware of the importance of controlling their SBP levels as patient awareness and education is a component of programs and interventions designed to improve the control of hypertension and Systolic blood pressure.

The Patient knowledge and awareness of BP plays an important role in one's ability to successfully control hypertension.[14-17] A earlier study by the same author showed an association between hypertension knowledge and compliance in hypertensive patients.[18] Recently it is the lack of knowledge of target systolic hypertension (systolic blood pressure) levels which was shown to be an independent predictor of poor BP control.[19]

The management of hypertension depends not only on drug therapy but on several non- pharmacological approaches.[20-22] Despite the availability of effective medication and other non pharmacological therapies, still the burden of hypertensive population and related complications is very high.[23] Lack of patients understanding of the disease, medications and life style modifications for the management of hypertension might be responsible factor for this situation. This fact is supported by many of the studies conducted worldwide[24,25]. Thus, pharmacological and non-pharmacological benefits can be achieved through the patient's understanding of disease medications & lifestyle modification when the pharmacist provides them with useful practical Information via counseling.

In the study carried out by Implementation of guidelines in diagnosis, treatment and prevention of non-communicable diseases is dependent on KAP of physicians involved in health and treatment sector.[26] It was found that hypertension is one of the risk factors in cardiovascular diseases, recognition of the correct indices for treatment seems to be indispensable[27]. In Iran the general practitioners are in the first line of treatment and KAP is determining factors in controlling of the disease. Population-based studies showed that only 50% of hypertensive patients are properly treated or their hypertensions are controlled.[28]

There are many barriers for prevention of complications of hypertension and controlling the disease. The most important barrier in diagnosis and control of this condition is the lack of knowledge and awareness about various aspects of hypertension[29]. In addition, there are several reasons for uncontrolled hypertension including undiagnosed hypertension, inappropriate or insufficient medication and wrong combination of drugs[30]. It is indicated that hypertensive patients had adequate general knowledge and awareness about hypertension but they did not have comprehensive understanding of their condition. For example, they did not understand the importance of systolic blood pressure (SBP) control and did not care about regular blood pressure (BP) measurement which suggested that an educational and interventional program for hypertensive patients is necessary.[31]

A study conducted in Nigeria for hypertension showed poor awareness as only 33.8% of hypertensives were aware of their condition Of these patients in Auchi.[32,33,34] very little is known about their knowledge, perception and attitude to treatment of hypertension. Therefore as part of a quality assessment to improve the management outcome of hypertensive patients.

The cross-sectional survey has been carried out to determine the status of hypertension awareness, treatment, and control conducted among 9901 civilian, non-institutionalized population of the United States. Twenty-four percent of the US adult population representing 43186000 persons had hypertension. The age-adjusted prevalence in the non-Hispanic black, non-Hispanic white and Mexican American populations was 32.4%, 23.3%, and 22.6%, respectively. Overall, two thirds of the Mexican American people with hypertension were aware of their hypertension diagnosis (69%), and a majority was taking prescribed antihypertensive medications (53%). Only one third of Mexican Americans with hypertension were being treated (35%), and only 14% achieved control in contrast to 25% and 24% of the non-Hispanic black and non-Hispanic white populations with hypertension, respectively. Almost 13 million adults classified as being normotensive reported being told on one or more occasions that they had hypertension; 51% of this group reported current adherence to lifestyle changes to control their hypertension.[35]

A study on prevalence, status of hypertension awareness, treatment, and control conducted among 15, 540 adults, in china. The result shows the age-specific prevalence of hypertension was 17.4%, 28.2%, 40.7%, and 47.3% in men and 10.7%, 26.8%, 38.9%, and 50.2% in women age 35 to 44 years, 45 to 54 years, 55 to 64 years, and 65 to 74 years, respectively. Among hypertensive patients, only 44.7% were aware of their high blood pressure, 28.2% were taking antihypertensive medication, and 8.1% achieved blood pressure control ($p<0.001$). On analysing the relationship of hypertension with other variables, no significant difference was noticed for education ($p=0.68$) smoking status ($p=0.46$) family history ($p=0.31$) and occupation ($p=0.27$).[36]

Effectiveness of lifestyle modification in hypertension

The study on effects of comprehensive lifestyle modification on BP control conducted on 810 participants, were randomized to the advice only group, the established group (Consisting of weight loss, increased physical activity and

reduced Na and alcohol intake) or established plus dietary approaches to stop hypertension DASH diet (consisting of established intervention in addition to the DASH dietary pattern). The primary outcome was change in systolic BP at 6 months. Net of advice only, mean systolic BP declined by 3.7 mm Hg for members of the established group ($p<0.001$) and 4.3 mm Hg for the established plus ($p<0.001$). The prevalence of hypertension decreased from a baseline of 38% to 17%. In the established group ($p=0.01$) and the 12% in the established plus DASH group ($p=0.01$) and to 12% in the established plus DASH group ($p<0.001$) compared with decrease in the advice only group.[37]

A study conducted to determine the effectiveness of exercise intervention on 203 sedentary untreated patients with stage or 2 essential hypertension at Ishitawaka-Takata on 2003. The participants were selected on the same selection criteria and divided in to five groups based on frequency and duration of exercise includes 30-60min/week, 61-90min/week, 91-120min/week and >120min/week. Except control group, all experimental group showed significant decrease in systolic and diastolic BP. This result demonstrated that minimal physical activity might decrease BP in adjusting adding beneficial amount of exercise more feasible for sedentary hypertensive patients. [38]

Thus pharmacological and non-pharmacological benefits can be achieved through the patient's understanding of disease, medications & lifestyle modification when the pharmacist provides them with useful practical information like counseling.

CONCLUSION

The study identified the KAP of the healthcare professionals particularly pharmacist has not carried out in hypertension in south Indian cities (North Karnataka). The Overall the KAP towards hypertension is low. Our findings suggest the need for educational and managerial interventions. Acknowledgment of the role pharmacist in hypertension would be conducive to better understanding the pathogenesis of hypertension, and provide new insight for improved treatment and prevention further study for pharmacist interventions needed.

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