Original Article

An Online Knowledge-Attitude-Practice Survey in the Community about Adult Hypertension from Eastern India

Raja Chakraverty[1], Ranjita Santra[2], Sudeshna Sasmal[3]

[1]ICMR Research Scientist, Department of Critical Care Medicine, Institute of Post Graduate Medical Education and Research, Kolkata, West Bengal, [2]Associate Professor, Department of Pharmacology, Deben Mahata Government Medical College & Hospital, Purulia, West Bengal, [3]Student, NMIMS (Distance learning), Mumbai, Maharashtra.

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Abstract

Background: To address the reasons for hypertension disease burden it is important to understand the knowledge, attitude, and practices (KAP) of all pertinent stakeholders including the community. This study explored the perception in the community regarding the burden of hypertension in Indiaas this is lacking in Indian studies.

Methods: A cross-sectional survey was conducted through online mode in India using a validated, field-tested questionnaire incorporating KAP domain questions regarding hypertension. Scores toquestions were appropriately assigned.

Results: The mean (SD) age of the respondents was 28.49 (7.508) years (n=225). The median (IQR) KAP scores were measured out of a maximum of 18, 5 and 4, respectively. Higher educational and socioeconomic levels were associated with better attitude scores, but knowledge levels were comparable. Correlations between KAP scores were poor.

Conclusions: This study reveals that laypersons in the community have appropriate knowledge and attitude regarding hypertension to some extent but there are important lacunae and practices are often found wanting. These issues need to be addressed through sustained public sensitizationand motivational campaigns to improve the future and treatment outcomes of hypertension in India.

Keywords: KAP (knowledge-attitude-practices); Hypertension; Community; survey, India.

Introduction

HTN presents a major area of intervention because it is a frequently occurring condition that is amenable to control through both nonpharmacological lifestyle factors and pharmacological treatment. While antihypertensive medications have been used for blood pressure control, there has been increasing emphasis on the prevention and treatment of HTN by nonpharmacological means termed lifestyle modifications. The recommended lifestyle measures that have been shownto be capable of reducing blood pressure include (i) salt restriction, (ii) moderation of alcohol consumption, (iii) high consumption of vegetables and fruits and low-fat and other

Corresponding Author: Raja Chakraverty, ICMR Research Scientist, Department of Critical Care Medicine, Institute of Post Graduate Medical Education and Research, Kolkata, West Bengal.

E-mail: rchakraborty20@yahoo.com

types of diet, weight reduction and maintenance, and (v) regular physical exercise. Hypertensive patients irrespective of their stage or grade should be motivated to adopt these measures. Motivating patients to implement lifestyle changes is probably one of the most difficult aspects of managing HTN.[1-3]

KAP questions tend to reveal not only characteristic traits in knowledge, attitude, and behaviors about health but also the idea that each person has of the disease. These factors are often the source of misunderstandings. The obstacle to change may be lack of knowledge. Recent reports have suggested that HTN knowledge is related to blood pressure control. The importance of HTN awareness and knowledge and the potential impact of BP education programs have been reported on recently. Although the outcome of a KAP study seems simple, the results of the study can have a huge impact on the local community.[2]

As the KAP study explores what is known and what is done in relation to a health care-related objective which is about hypertension in this study, the results will reveal the baseline information of the community and may reveal the misconceptions in relation to practice of hypertension. [4,5]

Methods

In this analytical cross-sectional study, a simple survey method was done in 225 people through online mode using Google survey platform and in this case the Google form was circulated through electronic media. The knowledge, attitude and practice (KAP) survey questionnaire was prepared in English construct validity check through peer review. Forward translation was done by (English and Bengali,). The questionnaire was then back translated to English to ensure the original meaning was unchanged. The final questionnaire comprised of responder details and 31 questions (knowledge domain 15, attitude 8, practice 8). [6,7]

Inclusion criteria were both diabetic and non-diabetic individuals aged above 18 years. Exclusion criteria were patients with gestational hypertension, patients younger than 18 years. After approving the validity and reliability of the questionnaire, 125 participants were enrolled. They filled out the questionnaire and their level of knowledge, attitude, and practice as well as the affecting factors were evaluated. Permission for conducting the study was accorded from the Institutional Ethics Committee (IEC) at Deben Mahata Government Medical College & Hospital, Purulia, West Bengal. The ethics committee had granted waiver of informed consent after due deliberation and upon satisfying that the study involved less than minimal risk to the participants in the community.

The study was designed as a eight-week-long questionnaire-based cross-sectional survey in the online mode across India and coordinated by the authors. The participating institution caters to patients of diverse socio-cultural and economic backgrounds. Respondents were visitors to the hospitals without any doctor or healthcare provider in their immediate family. Sampling was purposive and involved visitors to (a) various departments and administrative office (b) out- patients and indoor patients of the hospitals. [8,9]

The knowledge, attitude and practice (KAP) survey questionnaire was designed primarily by the author (RC) and approved by other two authors SS and RS. The master version was prepared in English and underwent face and construct validity check through peer review. The questionnaire was then back translated to English by the original translators to ensure the original meaning was unchanged. The final questionnaire comprised responder details and 27 items (knowledge domain 18, attitude 5, practice 4) related to hypertension. The questionnaire was administered to each respondent in an online mode (through Google forms) and scores were assigned for each question – one point for each correct answer and 0 for incorrect or uncertain response. Consolidated scores were obtained after summing across each of the three domains – knowledge, attitude and practice – individually. The scores on each domain were compared between centres, educational and socioeconomic subgroups. The study questionnaire (English version) is provided as supplementary material.

Sample size calculation assumed that the population of eligible respondents over a 4-week period was found to be 377. In the absence of supporting data, we also assumed that roughly

50% of the surveyed population is likely to have satisfactory knowledge-attitude-practice regarding antibiotic use. Thus, we estimated that the survey required 377 respondents to be interviewed so as to refine this 50% estimate with 4% margin of error and at 95% confidence level. Based on feasibility and by rounding off, we have kept a sample size of 125, RAOSOFT (Seattle, USA) sample size calculator, which is available online (http://www.raosoft.com/samplesize.html), was used for sample size estimation[8-11].

Data were analysed using SPSS version 20.0 (Illinois; Chicago: IBM) and Medcalc version 15.8 (Mariakerke, Belgium: MedCalc Software bvba; 2015) software. Descriptive summary has been reported as frequency, mean (standard deviation [SD]) or median (interquartile range [IQR]). Mann Whitney U or Kruskal Wallis with Dunnet post hoc tests (for non-parametric data) or unpaired *t* test (for parametric data, Chi square test (for categorical data) were employed for comparing subgroups. Analyses were two-tailed and the cut-off for statistical significance was set at $p < 0.05$. Association between scores in different domains were quantified by Spearman's correlation coefficient rho on the presumption of linear associations on corresponding scatterplots.

Results and Discussions [12,13, 15]

A large proportion of respondents (64.8%) stated not suffering from HTN. For the 225 study participants, the mean (SD) age was 28.49 ± 7.508 years. Among the respondents a male preponderance 62.4% was observed. A higher proportion of the respondents 58.4% reported to be living in urban areas. 47.2 % of the respondents stated not having hypertension patients in family. About 86.4% of the study respondents had monthly family income of more than Rs 10,000 per month. 68.8 % respondents stated not drinking alcohol while 75.8 % patients reported not smoking.

Previous K-A-P studies from India have not focused particularly on Eastern Indian context with respect to community perception and practice in relation to hypertension. Therefore, various issues need to be addressed in order to close the gaps between KAP responses and actual practice. Although education is considered as an integral part of hypertension management, it remains low in the practical priorities of clinicians. The results of this study encourage a positive outlook: all that is required is trained hypertension educator in hypertension management to counsel patients during their every visit. As a result, it is expected that counselling may have an impact in improving the perception about the disease, diet, and lifestyle changes and thereby addressing risk factors to prevent the complications of hypertension.

However, all participants had similar more or less access to information and to readily accessible education. Therefore, considering the average illiteracy rate and the demographic spread of the study participants from rural to urban, the findings of this study may be considered to represent those of the general population.[14, 16.17]

Conclusions

The study shows an average level of hypertension awareness and good level of positiveattitudes towards the importance of hypertension care. Yet at the same time the study found high levels of hypertension negligent behaviour among the study respondents. This paradoxical response was noted from the study and hence we propose on the need to carry out large-scale awareness programs specifically pertaining to the knowledge- gaps about hypertension in the community, after identifying the appropriate means to spread the message to the general population. There is also a need to develop of innovative tools and educational models that improve patient compliance and practices to hypertension management in Eastern India. Education and counselling on all aspects of hypertension is much needed. Planning for group as well as individualeducation programs will deliver preventative and management techniques for HTN. Limitations of study include the chance of respondents giving false information which is also possible for any KAP study survey. There is room for community practice to be improved by the provision of adequate information, increasing the availability of educational materials and proper guidance towards hypertension management. The study reinforces the view that the main approach to managing this problem is towards integrating all stakeholders' for understanding, compliance and management of the

disease by means of suitable health specialists and through widespread mass awareness campaigns by NGO's and Governmental agencies looking after public health.

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