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Rural-Urban Comparison of Knowledge, Attitude and Practice in Hypertension: A Study from West Bengal, India

[1]Milon Das and [2]Arnab Ghosh*

Abstract

Objectives: Virtually no study has been under taken to investigate the knowledge, attitude and practice for hypertension in people of Asian Indian origin. The present study was aimed to investigate and compare the knowledge, attitude and practice for hypertension in people living in two contrasting habitat- rural and urban.
Methods: A total of 457 participants (227 individuals from rural area including 87 males and 140 females & 230 individuals from urban area including 97 males and 133 females) aged 30 to 80 years took part in the study. Socio-economic information as well as participants' responses to hypertension was taken using a close ended schedule.
Results: It was evident that not only urban people but rural people also had knowledge and attitude towards the causes and risk for hypertension however, only a small proportion of participants in both areas had right practice towards hypertension.
Conclusion: Adequate public health initiatives including public awareness and healthy practice toward hypertension are utmost required to better comprehend the problem of hypertension in people of Asian Indian origin who genetically are predisposed to many cardiovascular disease risk factors including hypertension.
Keywords: KAP, hypertension, metabolic syndrome, rural-urban, Asian Indians

Introduction

Knowledge, Attitude and Practice (KAP) surveys are widely used to gather information for planning public health programmes improving the health of poor public across the world depends upon adequate understanding of the socio-cultural and economic aspect (Launiala, 2009). Some Public health professionals usually share the view that, Knowledge is based on scientific facts and universal truth, where beliefs refer to traditional ideas. However, knowledge and practice are not contrasting terms (Launiala, 2009; Pelto and Pelto, 1997). KAP study tells us about people knowledge, their feelings and behavior. It measure people knowledge, attitude and Practice. The knowledge possessed by a community refers to their understanding of any given topic. Attitudes refer 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 (Kaliyaperumal, 2004).

[1] Biomedical Research Laboratory, Department of Anthropology, Visva Bharati University, Santiniketan, West Bengal, India
[2] Dr. Arnab Ghosh, Biomedical Research Laboratory, Department of Anthropology, Visva Bharati University, Santiniketan 731 235, West Bengal, India. Tel: +91-9433345326; Email: arnab_cu@rediffmail.com

Hypertension is the largest contributor to global burden of disease (Aubert et al., 1998). Assessment of KAP is a crucial element of hypertensive control (Murray and Lopez, 1997; Aubert et al., 1998; Parmar et al., 2014). In developing countries (including India) hypertension (HT) has lately been recognized as a major health problem, in epidemiological transition from communicable to non communicable chronic disease (Aubert et al., 1998; Parmar et al., 2014). Hypertension is one of the most common cardiovascular diseases (CVD) with a prevalence ranging from 10 to 20 percentages among adult population globally (Murray and Lopez, 1997; Zhang et al., 2011). Subjects with hypertension possess two fold higher risk of developing coronary artery disease (CAD), four times higher risk of congestive heart failure and Seven types higher risk of cardiovascular diseases (CVD), compared to normotensive subjects (Zhang et al., 2011). 'The Global of Disease Study' has projected CAD and CVD as the leading cause of death worldwide by the year 2020 (Zhang et al., 2011). The emergence of HT and CVDs as a public health burden in these countries is strongly related to the aging of the populations, under nutrition and socioeconomic changes favoring sedentary habits, obesity, alcohol consumption and salt intake, among others (Aubert et al., 1998; Parmar et al., 2014).

In India, it was reported that, more than 20 million people are affected by HT (Nag and Ghosh, 2013). The prevalence of HT has increased 30 times among the urban people over a period of 55 years and about 10 times among the rural people over a period of 36 years (Gupta, Gupta and Ahluwalia, 1994; Das, Sannyal, Basu, 2005; Agarwal, Bhalwar, Basannar, 2008). It is assume that dramatic changes in life style from traditional to modern have lead to the physical inactivity due to technological advances, modified dietary pattern characterized by increased consumption of diet rich in fats, sugar, calories, increasing population growth on the one hand with technological advances have shrunken the employment opportunity on the other creating stress and HT (Agarwal, Bhalwar, Basannar, 2008). KAP study particularly helpful in the area of chronic conditions such as hypertension for which prevention and control necessities a lifelong adoption of healthy lifestyles (Aubert et al., 1998; Parmar, 2014).

However, virtually no studies were found in India where in KAP model was used to seek the nature of trend in HT as well as prediction of life style variables in both rural and urban areas. Keeping this view in mind, the present study was aimed to investigate and compare KAP in HT by habitat (rural vs. urban).

Subjects and Methods

Study population: The present community based cross-sectional study was conducted in between January and March, 2015 in a rural area near Barasat (about 50 km from Kolkata) and in Kolkata (as an urban area) in West Bengal, India. A total of 457 participants aged 30 to 80 years took part in the study. The rural group comprised of 227 individuals including 87 males and 140 females. On the other, the urban group comprised of 230 individuals including 97 males and 133 females. All the individuals were explained the objectives of the study and were also assured to keep the information strictly confidential. An appointment was requested to the respondent's respective homes for the collection of information. Written consent was taken from each individual prior to the actual commencement of the study.

KAP schedule: Information on socio-economic characteristics as well as respondents' KAP about HT was recorded in a pre-designed close ended schedule. Single individual was chosen from each household to avoid intra-household clustering of responses about hypertension.

Statistical analysis: Percentage of respondents' responses was performed using the SPSS (PC+ version 14).

Results

Socio-economic characteristics e.g. occupation, annual income, education, family size is presented in Table 1. It was found that, respondents' source of information about HT in rural and urban area was 62.6 percentage and 90.0 percentage from doctor, 15.4 percentage and 33.9 percentage from media, 79.3 percentage and 83.5 percentage from conversations with each other, 1.8 percentage and 3.5 percentage from internet, respectively. Moreover, in spite of inadequate knowledge about hypertension in both areas they were however, much aware about causes and symptoms of hypertension though a small percentage of respondents (24.7 percentage in rural vs., 20.4 percentage in urban area) were believed that hypertension is curable (results were not shown).

It was observed (Table 2) that most of the respondents (rural vs. urban) had the attitude for control and prevention of HT by losing extra pounds (94.3 percentage vs.96.1 percentage), increasing physical activity (96.5 percentage vs. 98.3 percentage), maintaining balance and healthy diet (92.1 percentage vs. 94.3 percentage), reducing salty diet (99.1 percentage vs. 99.6 percentage), reducing fast food/junk food (97.8 percentage vs. 98.3 percentage), stop tobacco consuming (98.2 percentage vs. 98.3 percentage) and reducing alcohol (96.9 percentage vs. 97.8 percentage).

It was also observed (results were not shown) that in rural area 20.3 percentage and in urban area 28.3 percentage respondents had the idea (knowledge) about HT from their respective doctors. The respondents (rural vs. urban) in both area also were of opinion that doctor did check their blood pressure as and when they visited their respective doctors (34.4 percentage vs. 51.3 percentage), explained about proper and balance diets (52.4 percentage vs. 64.3 percentage), exercise (58.6 percentage vs. 69.1 percentage), self care to control HT (68.1 percentage vs. 52.2 percentage).

Discussion

In this study, the aim was to measure public knowledge, attitude and practice in HT in two contrasting habitat- rural vs. urban. It was observed in the study that not only urban people, rural people too had the knowledge about causes, symptoms and possible life treating risk from hypertension, even in both area, they have the attitude for prevention of hypertension. Despite of this, very small percentages of people try to maintain this. It is noteworthy to mention that, self control is most important way for prevention of chronic condition such as HT.

In more industrialized countries, KAP study revealed that the percentage of public knowledge, attitude and practice were nearly similar (Aubert et al. 1998). But in our study, percentage of public knowledge, attitude and practice in hypertension is completely opposite in both rural and urban area. For example, most of the people have the knowledge, lack of physical activity is one of the reason for hypertension (76.7 percentage in rural, 64.3 percentage in urban), they have the attitude that, physical activity is essential to control/ prevent hypertension (96.5 percentage in rural, 98.3 percentage in urban), but very low percentage of individuals have the practice including regular exercise to control hypertension (23.3 percentage in rural, 31.7 percentage in urban). However, results were much better in alcohol and tobacco consumption, sodium intake etc. Thus, a reasonable gap existed between knowledge, attitude and practice which also resembles with other studies in Sub Saharan Africa, China, Nepal (Aubert et al. 1998; Zhang et al. 2011; Vaidya, Aryal and Kretteck, 2013; Ataklte et al. 2014).

It is noteworthy to mention that, it is the time to strategic changes and give more importance about self-control for the prevention of each and every disease by which positive attitudes can be converted into beneficial practices (Ghosh et al, 2010; Nag and Ghosh, 2013).

However, some shortcomings are associated with this study including small sample size. Percentage of women participants were unintentionally much greater because of their larger availability

compared to their male counterpart during day time. Moreover, because of ethnic and cultural variation in Asian Indian population, it is imperative to study other groups to see whether they also show similar trend as in present study. Further, respondents' mood as well as place and time may affect this sort of study.

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Table 1: Socio-economic characteristics of the study population (n=457)

Characteristics	**Rural% (n=227)**	**Urban% (n=230)**
Family size		
Small	59.0	62.6
Medium	30.8	29.1
Large	10.2	8.3
Education		
Primary	34.4	19.6
Secondary	47.1	50.9
High Secondary	6.6	9.6
Graduate	11.5	17.4
Post Graduate	0.4	2.2
Occupation		
Household worker	58.1	49.6
Service	13.7	20.0
Business	14.1	19.6
Laborer	11.9	8.3
Others	2.2	2.6
Monthly income (in Indian Rupees)		
<10,000	36.1	13.9
>10,000 - <20,000	32.2	52.2
>20,000	31.7	33.9
Source of information		
Doctor	62.6	90.0
Media	15.4	33.9
Another person's	79.3	83.5

Table 2: Respondents' attitude and practice about hypertension

Respondent's attitude and Practice	Rural (%)	Urban (%)
What should be done to control your BP?		
Lose your extra pounds	94.3	96.1
Exercise regularly	96.5	98.3
Eat a balance and healthy diet	92.1	94.3
Reduce sodium in your diet	99.1	99.6
Reduce fast food/Junk food	97.8	98.3
Stop tobacco consuming	98.2	98.3
Limit the amount of alcohol you drink	96.9	97.8
Do you maintain or practice following condition properly to control your blood pressure?		
Lose your extra pounds	42.7	44.8
Exercise regularly	23.3	31.7
Eat a balance and healthy diet	45.4	55.2
Reduce sodium in your diet	65.2	70.4
Reduce fast food/ junk food	85.5	86.1
Stop tobacco consuming	70.0	64.8
Limit the amount of alcohol you drink	98.7	97.8