

Original Research Article

Health beliefs about hypertension among hypertensive elderly people in Khammam urban locality: health belief model

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ABSTRACT

Background: Increased globalization, urbanization, improvements in science and technology, information technology made life style changes; prone to increased risk of non communicable diseases. Beliefs about hypertension determine behaviour of the hypertensive people towards hypertension and its complications. Health beliefs about hypertension can be studied by health belief model. The objectives were to know the socio-demographic characteristics and to quantify the health beliefs among elderly hypertensive people in the light of Health belief model.

Methods: A cross sectional study was done for a period of 6 months from January 2018 to June 2018 among people aged 50 years and above who were hypertensives in Khammam urban locality. Randomly 160 people were selected for the study. Data was collected by using a semi-structured questionnaire. Analysis will be done using proportions.

Results: The average number of years the individuals known to have hypertension was 6.38 years. The current systolic blood pressure in most of the elderly was in between 140-149 mm of Hg. The current diastolic BP in most of the elderly was 81-90 mm of Hg was followed by less than 80 mm of Hg. In the study, health beliefs were quantified. More than half of elderly had perceived threat of hypertension (54.6%). The health beliefs of perceived benefits were 44%. Perceived threats of barriers were 62.7%.

Conclusions: The information obtained will be useful for planning the health education or health promotion programs based on the needs and deficiencies of the people.

Keywords: NCDs, Life style, Health beliefs, Health belief model, Hypertension, Health promotion

INTRODUCTION

Increased globalization, urbanization, improvements in science and technology, information technology made life style changes; prone to increased risk of non communicable diseases (NCDs) like cancer, diabetes, hypertension, cardiovascular diseases, stroke, etc.^{1,2}

Worldwide raised blood pressure affects 1.13 billion people.³ In 2008, it was reported that 40% of adults aged 25 and above have been diagnosed with hypertension.⁴

Hypertension is responsible for at least 45% of deaths due to heart disease and 51% of deaths due to stroke.⁵

In the South-East Asia, nearly 35% of the adult population has hypertension, which accounts for 1.5 million deaths annually.⁵ In India, in 2015, the prevalence of hypertension, among people aged more than 18 years was 26.6% among males and 24.7% among females.⁶ The prevalence of hypertension among elderly was 40.5%.⁷ The urban and rural divide in the prevalence of hypertension is closing from 25% to 30% in urban and from 15% to 25% in rural populations.⁸

Beliefs about hypertension determine behaviour of the hypertensive people towards hypertension and its complications. Health beliefs about hypertension can be studied by health belief model (HBM), which consists of five constructs; perceived susceptibility and perceived severity as perceived threat; perceived benefits, perceived barriers, cues to action and self efficacy.^{9,10}

In India, few studies were conducted to study the health beliefs and behaviour among hypertensive people in the light of health belief model. So, the present study will be undertaken. The objectives of the study were to know the socio-demographic characteristics and to quantify the health beliefs among elderly hypertensive people.

METHODS

A cross sectional study was done for a period of 6months from January 2018 to June 2018 among people aged 50 years and above who were hypertensive in Khammam urban locality. In this study people 50 years and above were considered as elderly persons. People who were willing to participate were included in the study. People with known diabetes and renal diseases, and cardiovascular disorder; who are bed ridden were excluded. He/she will be asked, measured and then checked for blood pressure records or anti-hypertensive medication for diagnosis of hypertension. Randomly 160 people were selected for the study.

Data collection tool is a semi-structured questionnaire. The questionnaire consists of socio demographic variables, health belief components perceived susceptibility and perceived severity (as perceived threats), perceived benefits, perceived barriers and self efficacy questions. Each question will be provided with three alternative responses- yes, no or neutral. Each individual's response will be decoded into good belief and not good (bad) beliefs. Good beliefs are those beliefs that sustain positive health behaviour for the control blood pressure (BP). The study questionnaire of Tanya and Robinson was modified and used.¹¹

The questionnaire in the English language will be translated into local Telugu language and back to English. Well Calibrated digital BP apparatus will be used for measuring blood pressure.

Data will be analysed by IBM SPSS soft ware version 22. All the socio-demographic variables will be represented by mean±SD (standard deviation), or percentages or proportions. Analysis will be done using proportions. Ethical clearance was obtained from Institutional ethical committee.

RESULTS

A total of 160 elderly people participated in the study; and the Mean age of the individuals was 62.1±9.25. There were more males (59.4%) than females (40.6%). The average per capita income of the families was Rs.6822.

The illiterates were 40%; and unemployed were 43.8% (Table 1).

Table 1: Socio-demographic characteristics among elderly people in Khammam urban locality.

Variables	N (%)
Gender	
Males	95 (59.4)
Females	65 (40.6)
Education	
Illiterates/No formal education	64 (40)
Primary education (1 st to 7 th class)	31 (19.3)
Secondary education	
Intermediate/diploma	5 (3.1)
Degree/ PG/ PhD	30 (18.8)
Occupation	
Housewife/unemployed	70 (43.8)
Farmer/shopkeeper	45 (28.1)
Skilled/semi-skilled worker	16 (10)
Professional	19 (11.9)
Others	10 (6.3)

The average number of years the individuals known to have hypertension was 6.38 years. The current systolic blood pressure in most of the elderly was in between 140-149 mm of Hg followed by 160-169 mm of Hg, and followed by 150-159 mm of Hg. The current diastolic BP in most of the elderly was 81-90 mm of Hg was followed by <80 mm of Hg, and followed by 91-100 mm of Hg (Table 2).

Table 2: Current systolic and diastolic BP of the elderly people in Khammam urban locality.

Variables	N (%)
Range of systolic BP (mm of Hg)	
<110	10 (6.3)
110-119	9 (5.6)
120-129	1 (0.6)
130-139	30 (18.7)
140-149	50 (31.4)
150-159	11 (6.7)
160-169	39 (24.5)
170-179	6 (3.7)
180-189	4 (2.5)
Range of diastolic BP (mm of Hg)	
<80	55 (34.3)
80-89	60 (37.5)
90-99	35 (21.9)
100-109	10 (6.3)

In the study, health beliefs were quantified. More than half of elderly had perceived threat of hypertension (54.6%). Of these threats, most of the elderly had perceived threat of heart attack (56.2%). The health beliefs of perceived benefits were 44%. Perceived benefit

of reduced salt intake was noticed in large number of the elderly people (68.8%) but the belief eating lot of fruits and vegetable helps in lowering BP was low (31.2%). The belief of effect of smoking on blood pressure is falsely perceived. Perceived threats of barriers were 62.7%. The

construct cue to action among elderly was 40% and self efficacy was 68.8%. The pay attention to messages given by television, radio, news papers for control of BP was less (23.6%). Most of the people followed doctor advice (63.1%).

Table 3: Health beliefs about hypertension among elderly people in Khammam urban locality.

Health belief constructs	Good (%)	Not good (%)
Perceived threats		
Do you think BP (hypertension) will have effect on health	94 (58.8)	66 (41.2)
Do you think it may lead to paralysis	80 (50)	80 (50)
Do you think it may lead to heart attack (Ischemic heart disease)	90 (56.2)	70 (43.8)
Do you think high BP is a cause of concern	86 (53.8)	74 (46.2)
Total	350 (54.6)	290 (45.4)
Perceived benefits		
Do you think eating lot of fruits and vegetable helps in lowering BP	50 (31.2)	110 (68.8)
Do you think taking less salt helps in lowering BP	110 (68.8)	50 (31.2)
Do you think exercise helps for lowering BP	76 (47.5)	84 (52.5)
Do you think smoking lowers BP (Negative question)	45 (28.1)	115 (71.9)
Do you think less alcohol intake have effect in controlling BP	71 (44.4)	89 (55.6)
Total	352 (44)	448 (56)
Perceived barriers		
Do you think cost acts as a barrier for use of antihypertensive medication (Negative question)	75 (46.9)	85 (53.1)
Do you think it is difficult to take antihypertensive medications at correct time, at correct doses (Negative question)	145 (90.6)	15 (9.4)
Do you think it is difficult to go for BP checkups regularly (Negative question)	81 (50.6)	79 (49.4)
Total	301 (62.7)	179 (37.3)
Cues to action		
Do you take advice from the doctor/nurses/health workers	106 (66.2)	54 (33.8)
Do you take advice from the friends/family members	45 (28.1)	115 (71.9)
Do you pay attention to messages given by TV, radio, news papers for control of BP	41 (25.6)	119 (74.4)
Total	192 (40)	288 (60)
Self efficacy		
Are you able to reduce your stress at the work place	100 (62.5)	60 (37.5)
Are you able to exercise daily? (1/2hr to 1 hr for at least 4-5 days in a week)	115 (71.9)	45 (28.1)
Are you able to follow doctor's health advice for control of BP	101 (63.1)	59 (36.90)
Are you able to reduce salt in the diet	124 (77.5)	36 (22.5)
Total	440 (68.8)	200 (31.2)

DISCUSSION

The control of hypertension was demonstrated by different health promotion models.¹¹ In this study health beliefs associated with hypertension were quantified.

In a study conducted by Barros et al in Brazil, the average number of years of diagnosis hypertension was 9.35 years. In the same study, most of the participants systolic BP was <130 mm of Hg (28.6%) and 140-159 mm of Hg (26.3%). Most of the elderly people diastolic BP was <85 mm of Hg (56.4%) and 90-99 mm of Hg (22.6%).¹²

Compared to Brazil study, in the present study the average number of years of diagnosis hypertension was less (6.38 years). Most of the elderly people systolic BP

was in the range of 140-149 mm of Hg (31.4%); and diastolic BP was in the range of 80-89 mm of Hg (37.5%) and <80 mm of Hg (34.3%).

In the present study, less than half of the people felt cost not as a barrier for treatment (46.9%). In a study done in Washington, more than half of the respondents (57.5%) felt that treatment of high BP is not at all expensive.¹³

In a study done on health belief model and hypertension treatment compliance in Nigeria, 89.8% of the respondents knew that hypertension could lead to serious health problems or complications.¹⁴ On comparison, in the present study, more than 50% of the people felt that hypertension may cause ill health. In the adult respondents, 41.5% had poor compliance in taking antihypertensive medication and about 50% of them take

their medication as prescribed.¹⁴ In the study, less people felt difficulty to take antihypertensive medications at correct time, at correct doses (9.4%).

In cues to action component, 28.1% take advice from friends and family members. In study done in Nigeria, 28.9% adult respondents said friends were extremely concerned about their hypertension.¹⁴

CONCLUSION

The information obtained will be useful for planning health education or health promotion programs based on the needs and deficiencies of the people.

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Ethical approval: The study was approved by the Institutional Ethics Review Committee.

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