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**ORIGINAL ARTICLE**

## **Perceived Barriers and Effectiveness of Planned Teaching Programme on Life Style Modification Practices of Persons with Hypertension- A Study in Dakshina Kannada, Mangalore**

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### **Abstract:**

*Background:* Hypertension, a lifestyle disease is the major cause for all cardiovascular morbidity and mortality. Though controllable, its prevalence has been increasing worldwide as awareness, treatment and control rates are very poor. In India the situation is quite alarming and hence need to be intervened. *Aims and Objectives:* To determine the knowledge and perceived barriers of hypertensive persons on life style modification practices and to find the effectiveness of a structured teaching programme on the knowledge level. *Material and Methods:* An evaluative approach with pre experimental design was used for the study. 40 hypertensive adults were selected by purposive sampling technique. Demographic proforma, knowledge checklist and 5 point rating scale were the instruments used for the study. *Result:* The study revealed that, 19(47.5%) of the hypertensive adults had average knowledge, 18 (45%) had poor knowledge and only 3 (7.5%) had good knowledge. 21 (52.5%) of the hypertensive adults faced severe barriers. Among the barriers, the highest perceived barrier was lack of knowledge (82.27%) and least was lack of social support (53.14%). A significant improvement in the knowledge was found after the administration of the structured

teaching programme ( $t$  cal value = 22.22 >  $t$  tab (39) = 1.68,  $p < 0.05$ ). **Conclusion:** Education is a key component in bringing about changes in health care behavior. The present study calls for strengthening of public education system which plays a vital role in health promotion and disease progression.

**Key words:** Knowledge, perceived barriers, hypertension, lifestyle modification, planned teaching programme.

### **Introduction:**

Hypertension is the commonest cardiovascular disorder, posing a major public health challenge to populations in this socioeconomic and epidemiological transition. It is one of the major risk factors for cardiovascular mortality, which accounts for 20-50% of all deaths. According to Park (2001) the prevalence of hypertension in India is 59.9 and 69.9 per 1000 in males and females respectively in the urban population and 35.5 and 35.9 per 1000 in males and females respectively in the rural population [1].

Although it is an emerging modern epidemic worldwide its awareness, treatment and control rates are very poor. The 7th Joint National Committee on prevention, detection, evaluation, and treatment of high blood

pressure strongly advocated therapeutic lifestyle and behavioral modifications as an effective and cost effective strategy for individuals with hypertension [2]. But still there are some barriers that prevent the people from adopting a healthy life style and this can be overcome by constant encouragement, support, and appropriate education to the people.

Hence the researcher is justified in assessing the barriers for change and to educate the hypertensive persons on life style modification to improve knowledge and practice with the concept of –‘changing life saves life’.

### **Material and Methods:**

Forty hypertensive adults above the age of 40 years, who were able to converse in local language (Kannada), were selected by non probability purposive sampling technique from a selected community in Mangalore. Data was collected from 20.09.2010 to 14.10.2010. Demographic proforma, Knowledge checklist and 5 point rating scale on perceived barriers of life style modification were used to collect data from the sample. Reliability of both the tools was assessed by split half method and cronbrachs alpha. The reliability coefficient of both the tools was found to be 0.8. The knowledge checklist contained yes or no questions. The correct responses were given a score of one and incorrect responses were scored zero. The total score was 40. Rating scale comprised of 34 statements and the participants were instructed to report by rating their feelings on a 5 point likert scale: (1) strongly disagree; (2) disagree; (3) Undecided /neutral; (4) agree; (5) strongly agree. The total score was 170. The knowledge

checklist and rating scale were administered on day 1 to assess the pretest knowledge and perceived barriers. After the pretest on the same day the planned teaching programme was given to the participants. On the 7<sup>th</sup> day the same knowledge checklist was administered to assess the post test knowledge score. Collected data was analyzed by descriptive and inferential statistics.

### **Results and Discussion:**

Major findings of the study were as follows:

#### **Section I - Description of sample characteristics.**

Nearly half of the clients, 17 (42.5%) were in the age group of 51-60 years and majority, 26 (65%) of them were females. Similar findings were reported in a study conducted in Kerala to determine the prevalence and possible risk factors for hypertension and pre- hypertensive state. The study revealed that 70% of the hypertensive adults were equal to or older than 50 years with female preponderance [3].

Majority of the hypertensive adults, 28 (70%) were Hindus and 35 (87.5%) were married and 22 (55%) had no family history of hypertension (Fig. 1), 29 (72.5%) were non vegetarians, 34 (85%) had no habits of smoking and alcoholism. About 19 (47.5 %) of the hypertensive adults were from nuclear family, 37 (92.5%) were literate, and 16 (40%) had monthly family income of below Rs. 2000/- Highest percentage of hypertensives, 26 (65%) were having hypertension for less than 5yrs (Fig. 2) and only half of the hypertensive adults, 20 (50%) were following life style modification strategies.

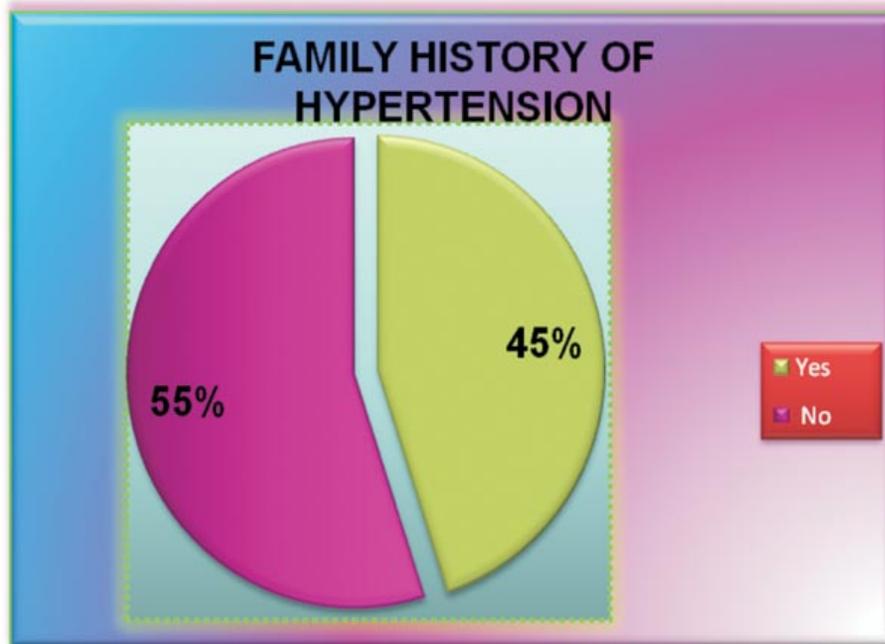


Fig. -1: Pie diagram depicting percentage distribution of clients based on the family history of hypertension

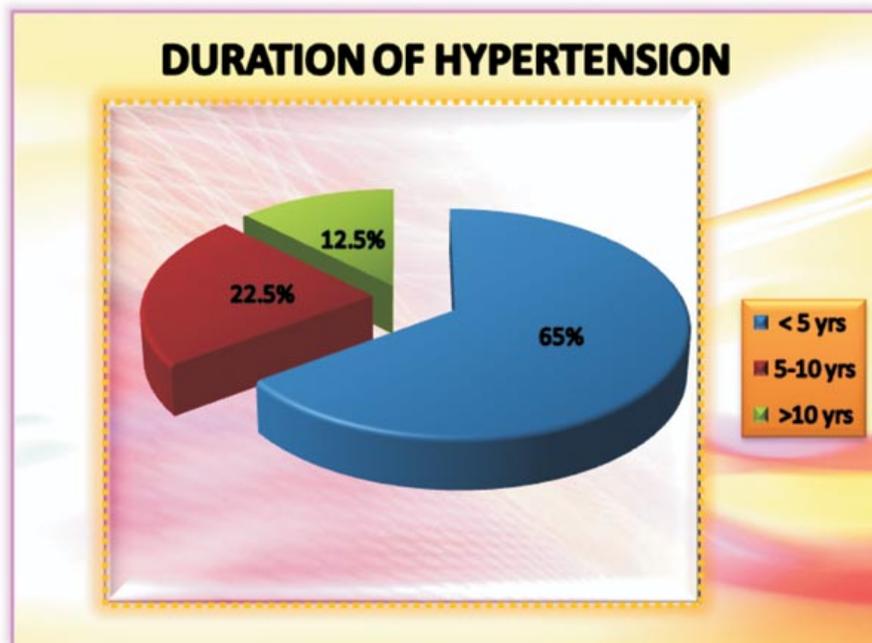


Fig.2: Pie diagram depicting percentage distribution of clients based on the duration of Hypertension

## Section II- Measuring the knowledge of hypertensive adults on life style modification practices.

Pre test results of the study revealed that, 19 (47.5%) of the hypertensive adults had average knowledge, 18 (45%) had poor knowledge and only 3 (7.5 %) had good knowledge. Post test results of the study revealed that 31 (77.5%) of the hypertensive adults had very good knowledge and 9 (22.5%) had good knowledge (Table 1). The above findings are consistent with a study conducted in Delhi, which revealed that only 62% of respondents

had heard of blood pressure and the awareness was comparatively more among women and settled-migrants [4].

Data in Table - 2 reveals that among the five areas, highest pretest means knowledge percentage score was in the area of smoking and alcoholism (55.83%) and least was in the area of dietary factor and obesity (37.06%). And data of post test showed that there was a drastic improvement in the mean percentage knowledge scores in all the five areas, with highest mean knowledge percentage score in the area of smoking and alcoholism (94.17%)

**Table 1- Distribution of pre-test and post- test knowledge scores of the samples regarding lifestyle modification strategies (n=40)**

Score range	Pre-test scores		Post-test scores	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Very Good (33 - 40)	0	0	31	77.5
Good (25 - 32)	3	7.5	9	22.5
Average (17 – 24)	19	47.5	0	0
Poor (0-16)	18	45	0	0

**Table 2- Pretest and post test Mean knowledge score and Mean knowledge percentage score in five areas of life style modification practices (n=40)**

Areas	Maximum possible score	Pre-Test		Post-Test	
		Obtained mean score	Mean Percentage score	Obtained mean score	Mean Percentage score
Concept of hypertension	13	6.45	49.62	11.08	85.19
Dietary factor and obesity	17	6.30	37.06	14.48	85.15
Exercise	3	1.55	51.67	2.55	85
Smoking and alcoholism	3	1.68	55.83	2.83	94.17
Prevention	4	2.15	53.75	3.60	90
Total	40	18.13	45.31	34.53	86.31

### Section III - Perceived barriers of life style modification practices related to hypertension

Majority of the clients 21 (52.5%) experienced severe level of barriers, 13 (32.5%) experienced moderate level of barriers and 6 (15%) had very severe level of barriers in adopting lifestyle modification practices towards the control of hypertension.

Data in Table 3 highlights that among the seven areas, the highest perceived barrier was in the area of lack of knowledge (82.27%) and least was in the area of lack of social support (53.14%). A study conducted by Maleka Serour, Abdel-Rahman Mustafa in Kuwait, to find out main barriers of adherence to diet observed that unwillingness (48.6%), difficulty adhering to a diet different from that of the rest of the family (30.2%) and social gatherings (13.7%) were responsible for 92.5% causes. To exercise were lack of time (39.0%), coexisting diseases (35.6%) and adverse weather

conditions (27.8%) [5]. A qualitative study conducted in rural Alabama to describe the perceptions regarding personal and environmental factors that affect hypertension have also revealed that the barriers to following the treatment plan were low income, high medical expenses, and lack of insurance. To medication were cost, dislike for taking medication, running out of medication, side effects, forgetting and being tired; and to exercise were being tired, busy schedule and safety [6].

### Section IV- Effect of planned teaching programme on life style modification practices

The study revealed that the mean post-test knowledge scores of subjects were significantly higher than their mean pretest knowledge scores. 't' calculated value = 22.22 is greater than the 't' table (39) = 1.68,  $p < 0.05$ . Hence planned teaching programme was found to be an effective method in increasing the knowl-

**Table 3 - Area wise distribution of mean, standard deviation and percentage mean of perceived barriers score of the samples (n=40)**

Areas	Maximum possible score	Mean	S.D.	% Mean
Lack of energy	15	10.90	3.14	72.67
Lack of motivation	20	13.55	3.67	67.75
Lack of self confidence	30	16.58	3.46	55.26
Lack of Time	20	13.93	4.02	69.65
Lack of Knowledge	30	24.68	4.68	82.27
Lack of Resources	20	15.17	3.372	75.85
Lack of Social support	35	18.60	4.73	53.14
Over all perceived barriers	170	113.4	20.16	66.70

edge of the hypertensive adults (Table-4).

The above findings are supported by a study that was conducted in South Africa to investigate the effect of an educational intervention on selected hypertensive participant's levels of knowledge about hypertension, their beliefs about medicines and adherence to antihypertensive therapy. The results of the study revealed that there was a significant increase in the participant's levels of knowledge about hypertension and its therapy ( $p < 0.001$ ) [7]. A study conducted in Nigeria also reports that 50% of the samples adopted lifestyle modification measures once they became aware of the effect of lifestyle modification measures [8].

contrary to the study findings of randomized clinical trial conducted in Chennai by Sudhakar Dayalan to assess the quality of life (life style modification) by teaching on hypertension among hypertensive patients [9]. This study revealed that there is a significant relation between knowledge on lifestyle modification and sex, marital status, educational status, occupational status and family income [9].

### Conclusion:

Hypertension is reported to be the fourth contributor to premature death in developed countries and the seventh in developing countries. Recent reports indicate that nearly 1

**Table 4 - Mean, Mean Difference, Standard error of Difference and 't' value of pre-test and post -test knowledge scores of hypertensive adults (n=40)**

Areas	Mean	Mean Difference	SED	t' value	L.O.S.
Pre-test	18.13	16.40	4.67	22.22	P<0.05 H.S.
Post-test	34.53				

't' table 39 = 1.68 H.S-Highly significant

### Section V - Association between knowledge on life style modification practices related to hypertension with selected demographic variables.

The present study findings revealed a significant association between knowledge on lifestyle modification practices of hypertensive adults and age ( $\chi^2$  cal = 6.030,  $p > 0.05$ ). The study also revealed that there was no association between knowledge on lifestyle modification practices of hypertensive adults and gender, religion, education, monthly income, family history of hypertension, dietary pattern and duration of hypertension. These findings are

billion adults had hypertension in 2000 and this is predicted to increase to 1.56 billion by 2025 [10]. Awareness of treatment and control of hypertension remains a major challenge in the world. The study undertaken calls for the need of strengthening patient education on life style modification practices which would surely help the hypertensive adults to take steps toward adopting life style modification strategies.

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