

## Impact of Intervention Programme on Knowledge, Attitude, Practices in the Management of Hypertension among Elderly

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**KEYWORDS** Hypertensive. Module. Life Style. Old Age. Assessment

**ABSTRACT** A study was carried out with the objective to assess the existing knowledge, attitude and practices (KAP) in the management of hypertension among elderly people. Based on the pre-existed knowledge a module of educational programme was developed by the investigators to improve their KAP in the management of hypertension and health. Purposive random technique was used for the study. The experimental group consisted of 80 elderly with hypertension out of which 40 each of men and women in the age group of 65 to 76 years selected from three areas of Bangalore city. An assessment of KAP among hypertensive elderly was made through a Structured Interview Schedule (SIS) developed by the investigator. A quasi-experimental approach with a repeated measure design was used with provision to compare the pre and post test assessment. The results revealed that the post test scores on KAP were higher than the pre test scores and individual differences also reduced considerably during post test for both men and women and the two age groups of respondents. Among the elderly, knowledge, attitude and practice (KAP) surveys are important and effective in terms of providing necessary information through intervention programmes for the prevention and management of hypertension and to improve their quality of life.

### INTRODUCTION

Hypertension is a major public health problem and a leading cause of death and disability in developing countries. One-quarter of the world's adult population has hypertension, and this is likely to increase to 29% by 2025. Modelled projections indicate an increase to 1.15 billion hypertensive patients by 2025 in developing countries (Mittal and Singh 2010). The elderly are the most rapidly growing population group in the world and prevalence of hypertension is high among this group (Nikolaos et al. 2012).

The increase in the percentage of elderly in the population has been accepted as a demographic reality in India. Almost half of the elderly population is hypertensive in India (Parray et al. 2008). Old age is known to bring physical, psychological and sociological changes of an undesirable nature. The number of people with hypertension is increasing among the aged due to stress, obesity and physical inactivity.

The risk of having diseases such as diabetes mellitus, hypertension, and coronary heart diseases rises as the population of elderly people increase. Such chronic diseases cause medical, social and psychological problems that limit the activities in elderly in the community and decrease their quality of life. The prevalence of

multiple chronic conditions among US adults reported that the most common dyad identified was arthritis and hypertension and the combination of arthritis, hypertension and diabetes was the most common triad (Ward et al. 2013). Hypertension in the elderly is a major risk factor for cardiovascular disease (Thones et al. 2013).

Cardiovascular diseases (CVDs) constitute 53% of deaths above the age of 30; 54% of these deaths are attributed to high blood pressure. Coronary artery disease (CAD) is the main cause of mortality in the world. Hypertension accounts for 13% of mortalities and 6% of morbidities and is one of the main risk factors that cause loss of healthy life years. Blood pressure is not optimally controlled even among those who are aware of their disease. Previous studies showed that apart from pharmacological treatment, lifestyle improvement can also play a significant role in the prevention of high blood pressure CVDs (Masoumeh et al. 2013). There should be an increasing awareness for maintaining a healthy life style and improving the quality of life. Using a holistic approach of healthy life style combined with knowledge and implication of genetic approach will make it possible to live a happy and healthy life during the last phase of the life span. Increasing the knowledge, awareness and control of hypertension will reduce morbidity and mortality. Uncontrolled hyperten-

sive's can be educated by special educational programme (Mumtaz et al. 2012).

With increase in life expectancy and modification of lifestyle cardiovascular disease especially hypertension is emerging as a major public health problem in the elderly people (Hazari-ka et al. 2003). This increase in the percentage of hypertension among elderly has been attributed to several factors including urbanisation with its associated changes in life style racial ethnic differences and nutritional status. Compounding this high burden of hypertension is the lack of awareness and insufficient treatment in those with hypertension. The public health response to this challenge should drive greater promotion of awareness efforts, studies of risk factors for hypertension and understanding of the impact of lifestyle changes.

The present research aims at studying the existing knowledge, attitude and practices in the management of hypertension among elderly; and the betterment of health, quality of life of elderly by improving their knowledge, positive attitude and better practice in their life style by way of an educational program.

### Objectives

1. To study the existing knowledge, attitude and practices (KAP) of managing hypertension in elderly and to compare men and women as well as two age groups of elderly; 65-70 years and 71-76 years on KAP.
2. To develop a module of educational program for old age people for better management of the disease and to improve their health and quality of life.
3. To assess the impact of the intervention program (Application of the module of educational program developed in the study) on improving the knowledge, positive attitude in the management of the disease and health of the experimental group of respondents.

### Hypothesis

1. There will be significant differences in the knowledge, attitude and practices to manage hypertension among men and women.
2. There will be significant difference in the KAP in the management of hypertension among the two age groups of elderly, namely 65-70 years and 71-76 years.

3. There will be a positive impact of educational program on KAP a). Men and women respondents and b). Two age groups of elderly.

## MATERIAL AND METHODS

### Selection of Sample

Purposive random sampling was adopted for the study. The sample selected for the study consisted of elderly with hypertension belonging to the age group of 65 to 76 years. A total sample of 80, of which 40 were men and 40 women, constituted the experimental group.

### Tool

The tool used for the study was Structured Interview Schedule (SIS) developed by the investigators on demographic profile and KAP with regard to hypertension.

### Procedure

The study involves co-operative action research with an exploration of knowledge, attitude and practices in the management of hypertension among elderly people. The study also consisted of formulation of a module of intervention program for educating elderly people with regard to hypertension and also to enlighten them to improve their health.

The study was carried out in five phases.

**First Phase:** As the study focused on the elderly with hypertension, old age people belonging to the age group 65 to 76 years were identified from three areas viz; Kumarapark, Seshadripuram, Sadashivnagar in Bangalore city. The sample constituted 80 elderly hypertensive of which 40 were men and 40 were women. Further they were classified into two age groups.

**Second Phase:** Once the respondents were identified, rapport was established and time was fixed as per their convenience to collect the data. The SIS on KAP in management of hypertension was administered. Both English and Kannada versions of the SIS used for data collection according their requirement.

**Third Phase:** A module of educational programme was developed by the investigators. The educational program was planned to cover all the aspects relevant to the management of

hypertension; life style management, food and nutrition, diet plan and counselling, stress management, acupuncture, health, active aging, importance of physical exercise / activities, laughing yoga, etc.

**Fourth Phase:** The respondents were informed to participate in the educational programme. A good rapport was built with the respondents. The program was scheduled for a period of two months from 6<sup>th</sup> January 2013 to 24<sup>th</sup> February 2013 on Sundays from 10.30am to 1.30 pm at the rate of one session per week. Attendance was ensured by making the program relevant and interesting for the group. Almost 95 percent of the respondents were regular and attended all the session. Each session was conducted with a specific objective of providing relevant information. Various audio visual aids, lectures, demonstration, individual and group counselling, group activities, question and answer, summarizing the concept described.

**Fifth Phase:** In the fifth phase of study, the impact of the intervention program was assessed using the same scale on KAP in the management of hypertension with an interval of two months between intervention and reassessment. Convenient time and venue near their residence were fixed for re-assessment. During the post test the respondents expressed their desire to attend such type of educational programs which help them to gain knowledge and improve their health.

**RESULTS AND DISCUSSION**

An important objective of the study was to develop an educational program for the benefit of hypertensive people and to examine its impact on the knowledge, attitudes and practi-

es of elderly as well as their health and quality of life. A hypothesis was set for verification stating that there will be a positive impact of educational program on a.) men and women respondents, and b.) two age groups of old people with regard to KAP and QOL. The pre and post test data of the sample were compared for this purpose. The sample constitution for this phase of study is given in Table 1.

**Table 1: The sample size of the four sub groups in the experimental group of respondents**

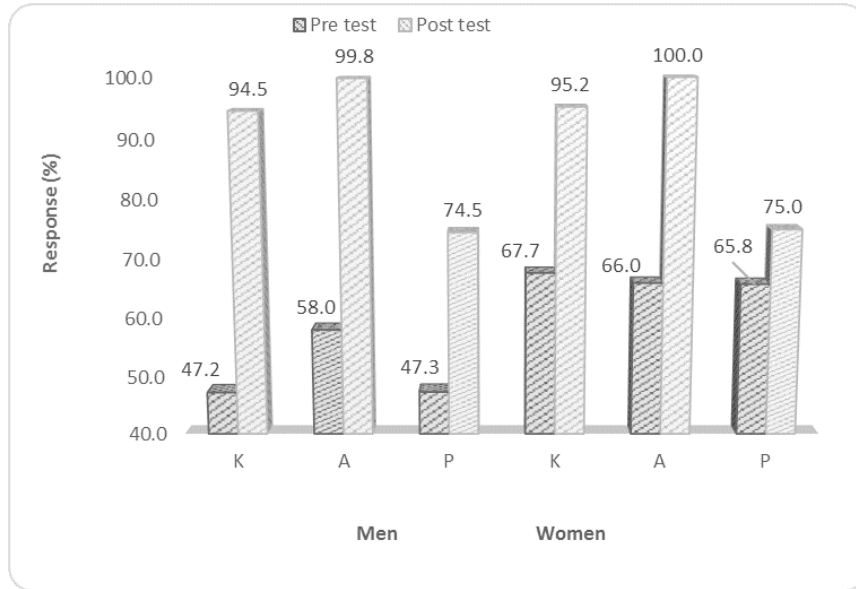
Age groups in years	Old age people		
	Men	Women	Total
65-70	24	26	50
70-76	16	14	30
Total	40	40	80

The mean scores and SD of scores on KAP regarding hypertension for men and women are given in Table 2. The ‘t’ values for significance of difference between the mean score of pre and post tests suggest that these differences are statistically significant. The post test scores on KAP were higher than the pre test scores and individual differences in the scores were also reduced considerably during post test both for men and women respondents. Men compared to women showed a lower score on KAP during the pre test. This study supports the findings in a cross sectional evaluation of 2310 adults from Portugal. The awareness was 58.9% among women and 41.3% among men (Pereira et al. 2010). However these differences were considerably reduced during the post test suggesting that the gain shown by men was more than the gain shown by women. Generally a high score at the base

**Table 2: Impact of the program on KAP scores of men and women respondents on hypertension**

Gender	Sample (n)	Aspects	Response						Paired 't' test
			Pre test		Post test		Difference		
			Mean	SD	Mean	SD	Mean	SD	
Male	40	Knowledge	47.2	24.1	94.5	5.5	47.3	23.7	12.62*
		Attitude	58.0	21.7	99.8	1.6	41.8	22.2	11.91*
		Practice	47.3	14.1	74.5	12.3	27.2	18.1	9.50*
Female	40	Knowledge	67.7	17.2	95.2	3.4	27.6	17.8	9.81*
		Attitude	66.0	16.3	100.0	0.0	34.0	16.3	13.19*
		Practice	65.8	14.2	75.0	12.1	9.2	10.0	5.82*

\* Significant at 5% level

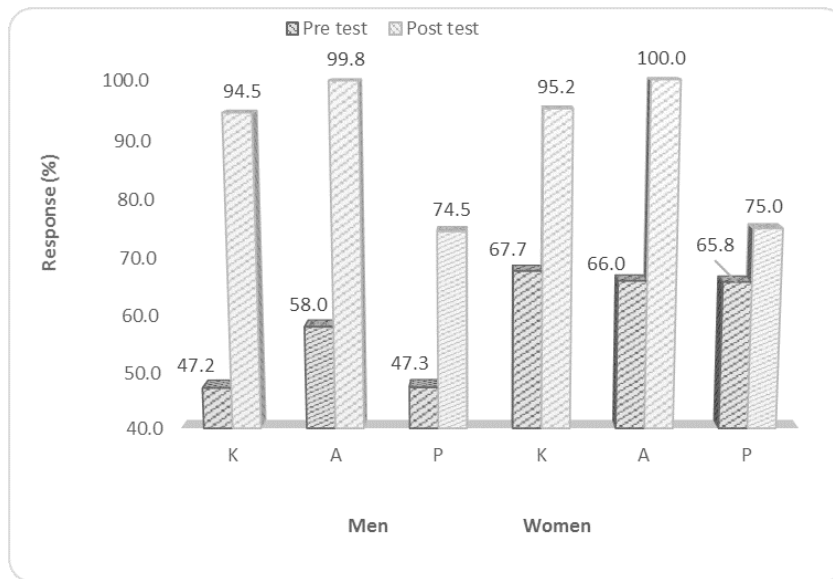


**Fig. 1. Impact of programme KAP score of men and women respondents on hypertension**

line leads to a lower gain. This ceiling effect is seen here as well. There is a need for educational and managerial intervention to manage hypertension which is a worldwide health concern and a global health burden (Biradar et al. 2012). The pre and post test means scores on KAP of

men and women respondents is shown in Figure 1.

The mean scores and SD of scores on KAP regarding hypertension for the two age groups are given in Table 3. The ‘t’ values for significance of difference between the mean score of



**Fig. 2. Impact of Programme on KAP scores of two age group of respondents on Hypertension**

**Table 3: Impact of the programme on KAP scores of the two age groups of respondents on hypertension**

Gender	Sample (n)	Aspects	Response						Paired 't' test
			Pre test		Post test		Difference		
			Mean	SD	Mean	SD	Mean	SD	
65-70	50	Knowledge	55.9	27.1	94.7	4.8	38.8	26.5	10.35*
		Attitude	60.4	20.0	99.8	1.4	39.4	20.3	13.72*
		Practice	59.3	19.9	80.0	11.3	20.7	20.6	7.11*
71-76	30	Knowledge	60.0	15.0	95.1	4.1	35.1	15.8	12.17*
		Attitude	64.7	18.7	100.0	0.0	35.3	18.7	10.34*
		Practice	51.9	8.6	66.0	7.5	14.1	7.1	10.88*

\*Significant at 5% level

pre and post tests suggest that these differences are statistically significant. The post test scores on KAP were higher than the pre test scores and individual differences in the scores were also reduced considerably during post test for both the age groups. Younger age group among the aged as compared to the older age group showed a lower score on KAP during the pre test except for practice scores. However these differences were considerably reduced during the post test suggesting that the gain shown by younger group was more than the gain shown by older respondents among the aged. A KAP study among hypertensive patients revealed that poor awareness and practices regarding hypertension resulted to be the main reason for higher blood pressure. It emphasized the need for encouraging health services including health education regarding risk factors (Hemanth et al. 2012).

The pre and post test mean scores on KAP of two age groups of respondents shown in Figure 2.

The hypothesis set for verification was accepted with regard to the impact of the educational program on KAP of hypertension. Men and women as well as the two age groups of respondents showed a statistically significant gain in their scores.

### CONCLUSION

In both the group of men and women respondents post test scores on KAP regarding hypertension were higher than the pre test scores and individual differences in the scores were also reduced considerably during post test. The gain shown by men was more than the gain shown by women. In both the age groups of respondents, the post test scores on KAP were

higher than the pre test scores. The gain shown by younger group was more than the gain shown by the older group among the aged. From the findings of the present study it can be concluded that it is possible to make elderly people aware of the ways to control their hypertension condition in their day-to-day lives. Disease management should include stress reduction, dealing with distressful emotions, locating and using community resources and self-management.

### RECOMMENDATIONS

The myth that hypertension is the disease of the elderly. The indication of an alarming rate of prevalence and the growth of this non epidemic health disorder emphasizes the immediate need to curb this trend.

Life style changes indicated in the study is not only a remedy but a preventive condition as well. With the increase in white collar jobs where people spend most of their time sitting immobile, with increasing stress and poor diet, it is natural to develop hypertension at an earlier age. This defeats the aim of 'health for all' unless taken seriously to bring about the required change among young and middle aged adults.

Need for establishment of centres for elderly to participate in awareness programmes for stress management, physical exercise and innovative recreational activities are recommended, with a compulsory membership of citizens in health care centres.

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