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Effect Of An Educational Intervention On Prevention And Management Of Hypertension Among Urban Adults

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ABSTRACT

Background of the study

Hypertension, often referred to as the "silent killer," is one of the most common non-communicable diseases and a major risk factor for cardiovascular morbidity and mortality worldwide. According to the World Health Organization, nearly one in four adults globally is living with hypertension, and its prevalence continues to rise due to rapid urbanization, lifestyle modifications, unhealthy dietary practices, and stress-related factors. In India, urban populations are particularly vulnerable owing to sedentary lifestyles, increased consumption of processed foods, tobacco and alcohol use, and limited awareness regarding preventive health practices.

Despite being preventable and manageable through lifestyle modification, early detection, and adherence to treatment, hypertension often remains undiagnosed or poorly controlled. Lack of awareness, misconceptions about the disease, irregular health check-ups, and inadequate health-seeking behaviors further compound the problem, especially in urban communities

Aim and objective: The aim of the study was to assess the effectiveness of an Educational Intervention regarding prevention and management of Hypertension among adults residing in a selected urban community of Mysuru

Methods: Research design adopted for the study was pre-experimental, one group pre-test, post-test design .Non probability purposive sampling was used to select 100 adults residing in the selected urban community for the study. Knowledge of adults regarding prevention and management of hypertension was assessed

using Structured Knowledge Questionnaire. Educational Intervention on prevention and management of hypertension was conducted for all subjects.

Results: The results of the study revealed that Educational Intervention was effective in increasing the knowledge of adults regarding prevention and management of Hypertension as evidenced by computed paired 't' test which was significant at 0.05 level of significance ('t' $_{99}$ = 16.88; $p<0.05$)

Conclusion: Educational Intervention was effective in enhancing the knowledge of adults regarding the prevention and management of Hypertension. The study findings stress the increasing responsibility of health professionals in planning and implementing various educational strategies to improve the knowledge of the public regarding prevention and management of Hypertension which in turn help to reduce their risk for Hypertension in their later life.

Keywords: Knowledge. Effectiveness, Educational Intervention, Hypertension, Urban adults

BACK GROUND OF THE PROBLEM

Hypertension has become a significant problem in many developing countries experiencing epidemiological transition from communicable to noncommunicable chronic diseases. According to the data updated by WHO on 25th August 2021, an estimated 1.28 billion adults aged 30-79 years worldwide have hypertension and two-thirds of them are living in low- and middle-income countries. The number of adults with hypertension increased from 594 million in 1975 to 1.13 billion in 2015, with the increase seen largely in low- and middle-income countries. This increase is mainly due to a rise in hypertension risk factors in those populations[1]. An estimated 46% of adults with hypertension are unaware that they have the condition and less than half of adults (42%) with hypertension are diagnosed and treated. As per the strategy of WHO, one of the global targets for noncommunicable diseases is to reduce the prevalence of hypertension by 33% between 2010 and 2030[2].

Hypertension is an important risk factor for cardiovascular morbidity and mortality, contributing around 25% of the NCDs burden globally. In India, urban populations are particularly vulnerable owing to sedentary lifestyles, increased consumption of processed foods, tobacco and alcohol use, and limited awareness regarding preventive health practices. [3]

Despite being preventable and manageable through lifestyle modification, early detection, and adherence to treatment, hypertension often remains undiagnosed or poorly controlled. Lack of awareness, misconceptions about the disease, irregular health check-ups, and inadequate health-seeking behavior further compound the problem, especially in urban communities[4]

Without intervention, the prevalence and absolute burden of hypertension is expected to continue to increase, particularly in low middle income countries. Lifestyle risk factors for hypertension, such as obesity, high dietary sodium intake, low dietary potassium intake, alcohol consumption, lack of physical activity and unhealthy diet have reached epidemic proportions in these countries including India. Community-based intervention programs are needed to reduce health disparities and improve hypertension prevention and control.[5] With this view, the present study was planned to assess the effectiveness of an Educational Intervention regarding prevention and management of hypertension among adults residing in an urban community of Mysuru

Aim and objective: The aim of the study was to assess the effectiveness of an Educational Intervention regarding prevention and management of Hypertension among adults residing in a selected urban community of Mysuru

METHODS

A pre-experimental one group pre-test post-test design was adopted for the study. Ethical clearance was obtained from the Institutional Ethics Committee. Non-probability purposive sampling technique was used to select 100 adults residing in the selected urban community of Mysuru. Validated, Structured knowledge questionnaire was used to assess the knowledge regarding prevention and management of hypertension. Anthropometric measurements such as height, weight, waist circumference and Blood pressure of adults were monitored using standardized instruments. Educational Intervention included the risk factors, clinical features, diagnosis, prevention and management of Hypertension.

RESULTS & DISCUSSION

1.Description of Selected Personal Variables of Study subjects

The selected personal variables of adults were age in years, gender, religion, educational qualification, dietary pattern, family history of hypertension, habit of drinking alcohol, habit of smoking, and previous exposure to educational programs regarding hypertension.

TABLE 1

Section 1: Frequency and percentage distribution of adults according to their selected personal variables

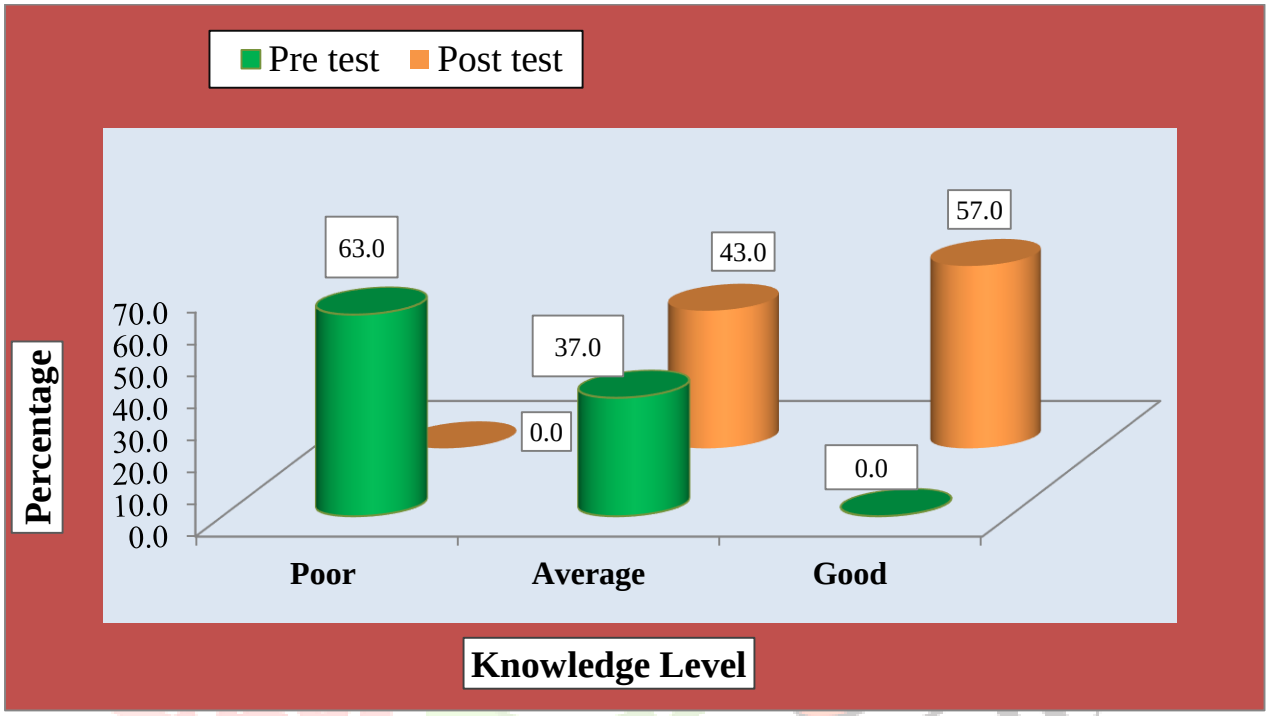
n=100

SL.NO	Personnel variables	Frequency (f)	Percentage (%)
1	**Age in years**		
	1.1 35-45	44	44
	1.2 Above 45	66	66
2	**Gender**		
	1.1 Male	57	57
	1.2 Female	43	43
3	**Educational qualification**		
	3.1 No Formal Education	42	42
	3.1 SSLC	50	50
	3.2 PUC	8	8
4	**Dietary pattern**		
	5.1 Vegetarian	36	36
	5.2 Mixed	64	64
5	**Family history of Hypertension**		
	6.1 Yes	27	27
	6.2 No	73	73
10	**Previous exposure to educational Programs**		
	10.1 Yes	6	6
	10.2 No	94	94
11	**Blood pressure**		
	11.1 Normal	42	42
	11.2 Pre hypertension	30	30
	11.3 Hypertension	28	28
12	**Body mass index**		
	12.1 Normal	34	34
	12.2 Obese	37	37

12.3 Over weight	29	29

Section 2. Effectiveness of Educational Intervention on prevention and management Hypertension.

I. Frequency and Percentage distribution of knowledge scores of urban adults according to their pre-test and post-test knowledge scores



Frequency and Percentage distribution of knowledge scores of adults according to their pre-test and post-test knowledge scores

It is evident that, the majority of adults (63%) had average knowledge and 37% had poor knowledge regarding the prevention and management of Hypertension in the Pre-test. Data also revealed that in the post-test, there was an increase in the knowledge level of adults i.e. 57% of them scored good and 43% had scored the average level of knowledge regarding prevention and management of Hypertension.

A descriptive study which has analysed the Knowledge, Attitude and Lifestyle Practices Pertaining to Hypertension among the People of Ahoe-Ho, Ghana also reported that less than half (49.3%) of the respondents knew the preventive measures of hypertension.[6].

A qualitative study conducted among hypertensive patients and their family care givers documented that study participants had little or no awareness of hypertension self-management practices. Participants also reported that they did not receive lifestyle management advice from healthcare professionals, [7].

II. Mean, mean difference, Standard deviation difference, Standard error and paired 't' value of Pre-test and post-test knowledge scores of urban adults

TABLE 2

n=100

Test	Mean	mean difference	standard deviation difference	standard error	paired 't' test value
Pre test	10.12	10.77	± 2.84	0.28	16.88*
Post test	20.89				

$t_{(99)} = 1.96$; $p < 0.05$ *significant

The data presented in Table 2 shows that the mean difference between pre-test knowledge score and post-test knowledge score is 10.77. To find the significance of the difference between the mean knowledge scores, paired 't' test was computed and obtained value of paired $t_{(99)} = 16.88$ was found to be significant at 0.05 level of significance. Hence it is interpreted that there was statistically significant difference between the mean pre-test and post-test knowledge scores of adults and inferred that Educational Intervention on the prevention and management of Hypertension was effective in improving the knowledge of adults.

Similar findings are observed in a study to assess the effectiveness of structured teaching training Programme on Knowledge and Practice of lifestyle modification among hypertensive patients attending out-patient clinics in Lagos, which documented that the pre-knowledge about hypertension among hypertensive patients differed significantly from post-knowledge after intervention ($t = 4.90$, $p = 0.001$). Significant difference was also observed between the pre and post knowledge level about lifestyle modification after intervention ($t = 3.62$, $p = 0.001$).[8]

A Cluster-Randomized Controlled Trial conducted to assess the effectiveness of a School-Based educational intervention to improve hypertension control among 402 school teachers in Kerala also stated that a greater proportion of intervention participants (49.0%) achieved hypertension control than the usual care participants (38.2%) after a 3-month educational intervention. The reduction in mean systolic blood pressure was significantly greater in the intervention group by 4.2 mm Hg than in the usual care group[9].

CONCLUSION

Conclusion

The findings of the present study demonstrated that the educational intervention significantly improved the knowledge, of urban adults regarding the prevention and management of hypertension. Participants who received the intervention showed better awareness about risk factors, lifestyle modifications, and adherence to treatment compared to the baseline. This highlights the effectiveness of structured educational strategies in empowering individuals to take responsibility for their health and in reducing the burden of hypertension in urban communities.

The study underscores the importance of integrating community-based educational programs into primary health care services to promote healthy behaviors, early detection, and effective management of hypertension. By strengthening health literacy, such interventions can contribute to long-term cardiovascular health promotion and reduction of preventable complications.

Conflict of Interest : Nil
Source of Funding: Nil

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