International Journal of Research
Available at https://edupediapublications.org/journals
p-ISSN: 2348-6848
e-ISSN: 2348-795X
Volume 03 Issue 12
August 2016

Effect of Educational Intervention on Life Style Modification among Hypertensive Patients.

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Abstract:

The present study was conducted with the purpose to assess effect of educational intervention on life style modification. Randomized control trial was conducted on 300 samples by using randomized block sampling technique where 150 samples were included in each group (control and study group). Investigator has prepared life style checklist; the tool was divided in three sections, Section I includes demographic information, Section II includes baseline data, Section III consist of includes life style checklist. Content validity was done from experts to ensure content validity of the tool. Reliability was done by test retest and inter-rater method calculated value was 0.88, and 0.93. Pre test was conducted for both groups. Educational intervention was given to study group and post test one was conducted for both groups after one month of intervention and after three month post test two was conducted. Result shows that in pretest control group, 60% of them had medication for hypertension. In posttest1 control group, 76.4% of them had medication for hypertension. In posttest2 control group, 60.1% of them had medication for hypertension. In pretest study group, 73.3% of them had medication for hypertension. In posttest1 study group, 99.3% of them had medication for hypertension. In posttest2 study group, all of them had medication for hypertension.

In study group, 2.7% of them were smokers in pretest, in posttest1 0.7% of them were smokers and none of them were smokers in posttest2. In control group, 6% of them were smokers in pretest, in posttest1 5% of them were smokers and 5% in posttest2.

In study group, in pretest, 17.3% of them had habit of tobacco chewing. In posttest1, 5.4% of them were chewing tobacco. In posttest 2, 3.4% of them were chewing tobacco. In control group, in pretest, 22% of them had habit of tobacco chewing. In posttest1, 21% of them were chewing tobacco. In posttest2, 21% of them were chewing tobacco.

In study group, in pretest, 5.3% of them had alcohol. In posttest1 and posttest2, 2% of them had alcohol. In control group, in pretest, 8% of them had alcohol. In posttest1 and posttest2, 8% of them had alcohol.

In study group, in pretest, 18% of them had exercise. In posttest1, 99.3% of them had exercise. In posttest2, all of them had exercise. In control group, in pretest, 29% of them had exercise. In posttest1, 32% of them had exercise. In posttest2, 28% had exercise.

In study group, in pretest, 64% of them had fruits and vegetables. In posttest1, all of them had fruits and vegetables. In posttest2, all of them had fruits and vegetables. In control group, in pretest, 79% of them had fruits and vegetables. In posttest1, 78% had fruits and vegetables. In posttest2, 78% had fruits and vegetables.

In study group, in pretest, 52.7% of them had non-veg. in study group, in posttest1, 53% of them had non-veg. in experimental group, in posttest2, and 52.7% of them had non-veg once a week. In control group, in pretest, 57% of them had non-veg, in posttest1, 57% of them had non-veg. in control group, in posttest2, 57% of them had non-veg.

In study group pretest, 56.7% of them had table salt. In posttest1 and posttest2, none of them had table salt. In control group pretest, 52% of them had table salt. In posttest1 and posttest2, 51%of them had table salt.

To assess the effectiveness of intervention on life style of hypertensive patients, at posttest1, the p-values corresponding to factors tobacco, exercise, fruits & vegetables and table salt are small (less than 0.05), the intervention was found to be significantly effective in improving the lifestyle of hypertensive patients on factors tobacco, exercise, fruits & vegetables and table salt. For the effectiveness at posttest2, the p-values

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corresponding to factors tobacco, exercise, fruits & vegetables and table salt are small (less than 0.05), the intervention was found to be significantly effective in improving the lifestyle of hypertensive patients on factors tobacco, exercise, fruits & vegetables and table salt.

In present study educational intervention was effective to modify life style of hypertensive patients

Keywords

Effect, Educational Intervention, Life style, Modification, Hypertension, patients.

1. Introduction

Health is multi dimensional, the W.H.O definition envisages three specific dimensions the physical, the mental and the social .The state of physical health implies the notion of perfect functioning of the body. It conceptualizes health biologically as a state in which every cell and every organ is functioning at optimum capacity and in perfect harmony with the rest of the body. Health is multi factorial. The factors which influence health lie both within the individual and externally in the society in which he or she lives. The life style is rather a diffuse concept often used to denote the way people live reflecting a whole range of social values, and attitude. It is composed of cultural and behavioral pattern and lifelong personal habits that are developed through processes of socialization. Health requires the promotion of healthy life style. A considerable body of evidence has accumulated which indicates that there is an associate between health and lifestyle of individuals. Many current day health problems especially in the developed countries are associated with life style changes.[3]

Hypertension is major risk for cerebral atherosclerosis, stroke and cardiovascular diseases. Even in mildly hypertensive people the risk of stroke is four times higher than in normotensive people. Adequate control of blood pressure diminishes the risk of stroke. Life style modification are indicated for all patients with prehypertension and hypertension.[5]

Education is a process, the chief goal of which is to bring about desirable changes in the behavior of the learner in the form of acquision of knowledge, proficiency in skills and development of attitudes.[8]

2. Methodology and technique

Evaluative approach and randomized controlled trial (experimental) design was used to assess the effect of educational intervention on life style modification. Population was divided into two groups control group and study group by randomized block sampling technique. sample size of the study was consist of 300 hypertensive patients from selected setting in which 150 samples for study group and 150 samples for control group was selected those who have attended outpatient department of hospitals. Investigator has prepared life style checklist .Tool was divided into four sections Section I includes demographic information which consist of 10 items like age, gender, education, occupation, monthly income, religion, duration of disease , suffering from other disease, taking medication. Section II includes baseline data items are pulse, BP, height, weight (BMI), waist circumference, hip circumference (waist/hip ratio), BSL, and cholesterol.
Section III consist includes life style checklist consist of habits smoking, tobacco chewing, alcohol, exercise, fruits, vegetables, diet veg / non-veg, table salt. Content validity was done from experts to ensure content validity of the tool. Reliability was done by test retest and inter-rator method r value was 0.88, 0.93, and 0.93. Pretest was done on both groups, after pretest educational intervention was given to study group and posttest was conducted on both groups after one month and three month.

3. Result and Discussion

Description of samples as per personal characteristics (Table 1.1) are in control group, 34% of the hypertensive patients had age more than 60 years, in study group, 34.7% of the hypertensive patients had age more than 60 years. In control group, 52% of them were females and 48% of them were males, in study group, 56% of them were females and 44% of them were males. In control group, 36.7% of them had education below 10th standard, in study group, 37.3% of them had education below 10th standard. In control group, 67.3% of them had income Rs.5000-15000, in study group, 64% of them had income Rs.5000-15000. In control group, 38.7% of them were housewives, in study

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group, 50.7% of them were doing household work. In control group

Table 1.1: Description of samples (hypertensive patients) based on their personal characteristics in terms of frequency and percentages
n=150, 150

Demographic variable	Control group		study group	
	freq	%	freq	%
Age				
up to 35 years	18	12.0%	17	11.3%
36-40 years	13	8.7%	11	7.3%
41-45 years	10	6.7%	12	8.0%
46-50 years	14	9.3%	16	10.7%
51-55 years	16	10.7%	23	15.3%
56 60 years	28	18.7%	19	12.7%
>60 years	51	34.0%	52	34.7%
Gender				
females	78	52.0%	84	56.0%
male	72	48.0%	66	44.0%
Education				
illiterate	51	34.0%	52	34.7%
< 10th	55	36.7%	56	37.3%
10th pass	27	18.0%	31	20.7%
12th pass	9	6.0%	7	4.7%
ug	8	5.3%	4	2.7%
pg	0	0.0%	0	0.0%
Income				
up to Rs. 5000	1	0.7%	45	30.0%
Rs. 5000-15000	101	67.3%	96	64.0%
Rs.15001-25000	46	30.7%	8	5.3%
Rs 25001-35000	2	1.3%	1	0.7%
Occupation				
business	42	28.0%	28	18.7%
house hold work	58	38.7%	76	50.7%
laborer	0	0.0%	5	3.3%
retired	8	5.3%	17	11.3%
service	42	28.0%	24	16.0%

(Table 1.2), 76.7% of them were married, in study group, 81.3% of them were married. In control group, 88% of them were Hindu, in study group, 85.3% of them were Hindu. In control group, 52% are suffering from study last 1yr, in study group, 57.3% of them are suffering from hypertension last 1 year. In study group, 50% of them did not have any disease, 43.3% of them had diabetes mellitus, 3.3% of them had heart disease, 3.3% of them had some other disease. In control group, 48.7% of them did not had any disease, 50% of them had diabetes mellitus and 1.3% of them had some other disease. In control group, 60% of them had medication for hypertension, in study group, 73.3% of them had medication for hypertension.

Table 1.2: Description of samples (hypertensive patients) based on their personal characteristics in terms of frequency and percentages
n=150, 150

Demographic variable	Control group		study group	
	freq	%	freq	%
Marital status				
married	115	76.7%	122	81.3%
separated	1	0.7%	0	0.0%
unmarried	8	5.3%	3	2.0%
widow/widower	26	17.3%	25	16.7%
Religion				
christian	0	0.0%	4	2.7%
hindu	132	88.0%	128	85.3%
muslim	17	11.3%	17	11.3%
other	1	0.7%	1	0.7%
Duration				
up to 1 year	78	52.0%	86	57.3%
1-3 years	24	16.0%	28	18.7%
3-7 years	20	13.3%	20	13.3%
> 7 years	28	18.7%	16	10.7%
Disease				
DM	65	43.3%	75	50.0%
Heart disease	5	3.3%	0	0.0%
other	5	3.3%	2	1.3%
no	75	50.0%	73	48.7%
Medication				
no	60	40.0%	40	26.7%
yes	90	60.0%	110	73.3%

When hypertensive patients have asked are they taking medication (Table 1.3) in pretest control group, 60% of them had medication for hypertension. In posttest1 control group, 76.4% of them had medication for hypertension. In posttest2 control group, 60.1% of them had medication for hypertension. In pretest study group, 73.3% of them had medication for hypertension. In posttest1 study group, 99.3% of them had medication for hypertension. In posttest2 study group, all of them had medication for hypertension.

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Table 1.3 Medication in pretest and posttest
N=150, 150

Test	Medication	Control group		Study group	
		freq	%	freq	%
pretest	No	60	40.0%	40	26.7%
	Yes	90	60.0%	110	73.3%
Posttest 1	No	35	23.6%	1	0.7%
	Yes	113	76.4%	148	99.3%
Posttest 2	No	59	39.85%	0	0.0%
	Yes	89	60.1%	148	100.0%

Life style analysis result stated that in study group, 2.7% of them were smokers in pretest, in posttest1 0.7% of them were smokers and none of them were smokers in posttest2. In control group, 6% of them were smokers in pretest, in posttest1 5% of them were smokers and 5% in posttest2. In study group, in pretest, 17.3% of them had habit of tobacco chewing. In posttest1, 5.4% of them were chewing tobacco. In posttest2, 3.4% of them were chewing tobacco. In control group, in pretest, 22% of them had habit of tobacco chewing. In posttest1, 21% of them were chewing tobacco. In posttest 2, 21% of them were chewing tobacco. In study group, in pretest, 5.3% of them had alcohol. In posttest1 and posttest2, 2% of them had alcohol. In control group, in pretest, 8% of them had alcohol. In posttest1 and posttest2, 8% of them had alcohol. In study group, in pretest, 18% of them had exercise. In posttest1, 99.3% of them had exercise. In posttest2, all of them had exercise. In control group, in pretest, 29% of them had exercise. In posttest1, 32% of them had exercise. In posttest2, 28% had exercise. In study group, in pretest, 64% of them had fruits and vegetables. In posttest1, all of them had fruits and vegetables. In posttest2, all of them had fruits and vegetables. in control group, in pretest, 79% of them had fruits and vegetables. In posttest1, 78% had fruits and vegetables. In posttest2, 78% had fruits and vegetables. In study group, in pretest, 52.7% of them had non-veg. in study group, in posttest1, 53% of them had non-veg. in study group, in posttest2, and 52.7% of them had non-veg once a week. In control group, in pretest, 57% of them had non-veg, in posttest1, 57% of them had non-veg. in study group, in posttest2, 57% of them had non-veg. In study group pretest, 56.7% of them had table salt. In posttest1 and posttest2, none of them had table salt. In control group pretest, 52% of them had table salt. In posttest1 and posttest2, 51%of them had table salt.

Researcher applied Fisher's exact test (Table 2) for the effectiveness of intervention on life style of hypertensive patients. For the effectiveness at posttest1, the p-values corresponding to factors tobacco, exercise, fruits & vegetables and table salt are small (less than 0.05), the intervention was found to be significantly effective in improving the lifestyle of hypertensive patients on factors tobacco, exercise, fruits & vegetables and table salt. For the effectiveness at posttest2, the p-values corresponding to factors tobacco, exercise, fruits & vegetables and table salt are small (less than 0.05), the intervention was found to be significantly effective in improving the lifestyle of hypertensive patients on factors tobacco, exercise, fruits & vegetables and table salt.

Table 2: Effectiveness of intervention on life style of hypertensive patients
N=150

Factor	Lifestyle item	Pretest	Posttest 1	Posttest 2	P value (Pretest and Posttest1)	P value (Pretest1 and Posttest2)
Smoking	No	146	148	148	0.371	0.123
	Yes	4	1	0		
Tobacco	No	124	141	143	0.000	0.000
	Yes	26	8	5		
Alcohol	No	142	146	145	0.218	0.218
	Yes	8	3	3		
Exercise	No	123	1	0	0.000	0.000
	Yes	27	148	148		
Fruits and vegetables	No	54	0	0	0.000	0.000
	Yes	96	149	148		
Non-veg	No	71	70	70	1.000	1.000
	Yes	79	79	78		
Table salt	No	65	149	148	0.000	0.000
	Yes	85	0	0		

4. Conclusion and Recommendations'

In pretest control group, pre test to post test difference is less but in study group pre test to post test improvement in taking medication is 100% all samples were having medication at the post test 2.

To assess the effectiveness of intervention on life style of hypertensive patients, at posttest1, the p-values corresponding to factors tobacco, exercise, fruits & vegetables and table salt are small (less than 0.05), the intervention was found to be significantly effective in improving the lifestyle of hypertensive patients on factors tobacco, exercise, fruits & vegetables and table salt. For the effectiveness at posttest2, the p-values corresponding to factors tobacco, exercise, fruits & vegetables and table salt are small (less than 0.05), the intervention was found to be significantly effective in improving the lifestyle of hypertensive patients on factors tobacco, exercise, fruits & vegetables and table salt. Educational intervention was effective for modification of life style. Educational interventions are recommended to increase awareness of life style modification.

5. Acknowledgements

The authors would like to thank all the participants for participating in the study.

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