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EFFECTIVENESS OF HEALTH INSTRUCTION RELATED TO DIET AND DRUG IN INCREASING THEB LEVEL OF KNOWLEDGE ON HYPERTENSIVE PATIENTS ASSOCIATED WITH CARDIAC PROBLEMS

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Abstract:

The study was conducted to assess the effectiveness of health instruction related to diet and drugs in increasing the level of knowledge on hypertensive patients associated with cardiac problems.

The study was experimental in nature and quasiexperimental design was used to achieve the objectives of the study, which was conducted in a selected hospital at Bangalore. This study was carried on a group of hypertensive patients associated with cardiac problems and who were admitted first and second time in the hospital. The sampling technique was purposive sampling consisting of 15 patients in the experimental group and another 15 in the control group who were chosen randomly.

A structured interview schedule consisting of 45 questions were prepared from the three lessons to be taught and were administered on the initial day of admission to patients of both experimental and control group. The questions were closed ended to be answered either "yes" or "no" or "don't know". Health instruction lessons were given only to the experimental group for the next three days. A total of three lessons were included with one lesson being taught each day.

A post test was then conducted to both the groups with the same questionnaire one day after the last teaching. Descriptive and inferential statistics had been used to analyses the date. The comparative results of the post test scores of the experimental group and the control group showed that the scores of the experimental group was significantly higher than the post test scores of the control group.

This study indicates that the health instruction regarding diet and drug in the management of hypertension was effective in increasing the knowledge of hypertensive patients.

KEYWORDS:

Health instruction: It is an instruction relating to diet and drugs for hypertensive patients to increase the level of knowledge

Hypertension: It is a disease condition in which there is a persistent elevation of systolic and diastolic pressure ie140/90mmHg and above.

Hypertensive patients: In this study selected patients are hypertensive patients associated with cardiac problems such as IHD&RHD

Diet: Means selection of food recommended for hypertensive patients

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Drugs: These are the medications given to hypertensive patients.

Illness: It is a sickness associated with changes in the normal physiological function of the heart.

INTRODUCTION

Hypertension, the silent killer of mankind is a public health problem in the developed and developing countries. In most sufferers it is asymptomatic and hence early diagnosis is a problem. High blood pressure is the one which if untreated produces complications. It is one of the risk factors for stroke, cardiovascular diseases and chronic renal failure. It is one of the leading causes of death and disability among adults.

With the increasing pace of life and its inherent tensions hypertensive heart diseases have become more common and more or less a fact of life. Hypertension is a preventable and controllable epidemic worldwide. By adopting proper diet and drug therapy we can prevent the diseases of the heart and the arteries.

PROBLEM STATEMENT

“A Study to assess the effectiveness of health instruction related to diet and drug in increasing the level of knowledge on hypertensive patients associated with cardiac problems.”

SIGNIFICANCE

Heart is one of the vital organs in humans. Heart diseases and vascular diseases are very common in developed and in underdeveloped countries. These diseases are preventable through proper education.

Health teaching is an integral part of nursing and one of the components of primary health care. It is an important means of bringing about healthy behavior among the clients. The principles of health teaching are basic to the care of all patients. The emphasis is to help the patient himself.

On the occasion of world health day on 7th April, 1992, the theme of which was “Heart Beat –The Rhythm of Health”, Dr.Hiroshi Nakajima said in his message that diseases of the heart and arteries account for an estimated 12 million annually. Worldwide they kill more people than any other single disease and disable millions. Even worse is the many fact that victims are under the age of 65 years.By devoting the world health day1992 to the theme of

Heart health, the aim of the world health organization to increase public awareness of the worldwide dimensions of cardiovascular diseases and to sound an alarm against their spread is emphasized.

The American heart association has issued a scientific statement “The multilevel compliance challenge and a call to action provided a new paradigm for conceptualizing the management of risk factors. The national high blood pressure education programme, USA (2000) recommended raising the awareness on the danger of high systolic blood pressure through the educational element. There is an urgent and immediate need in the country for a strong collaborative effort to fight the problem of uncontrollable hypertension.

SCOPE OF THE STUDY

The WHO attributes hypertension as the leading cause of cardiovascular mortality. The world hypertension league (WHL) recognized that more than 50% of the hypertensive population worldwide is unaware of its condition. To address this problem, the WHL initiated a global awareness campaign on hypertension in 2005 and dedicated ay 17 of each year as World Hypertension Day.

Framingham prospective study first focused attention on the fact that 37% of men and 51% of women who died of cardiovascular diseases had an arterial pressure above 140/90mmHg on at least three occasions. In India 10-15% of adult population is hypertensive and nearly 50%of all deaths in elderly people are related to hypertension or its complications thereof.

Hypertension is directly responsible for 57%of all stroke deaths and 24% of all coronary heart diseases death in India. Pooling of epidemiological studies shows that hypertension is present in 25% of urban and 10% of rural subjects in India.

Hypertension continues to be poorly diagnosed, treated and controlled. The American Heart association has issued a scientific statement.” The multilevel complains challenge and a call to action providing a new paradigm for conceptualizing the management of risk factors. The National high Blood pressure Education Program, USA (2000) recommended to raise the awareness on the danger of high

systolic blood pressure through the educational element. There is an urgent and immediate need in the country for a strong collaborative effort to fight the problem of uncontrollable hypertension. Winning the battle will require a broad range of educational and intervention program. (Martha N.Hill, 2000).

Nurses as health professionals can play an important role in creating awareness among the public. They are in an ideal position to assess for the presence of hypertension, identify the risk factors for hypertension and teach the patients about these conditions. The nurse should also assess patient's diet, activity and lifestyle. After an extensive review of literature, the investigator has taken up this study to educate the hypertensive patients regarding their diet, drug and lifestyle changes.

OBJECTIVES OF THE STUDY

1. Assess the level of knowledge of patients regarding diet and drug by administering a pretest to the experimental and control groups.
2. Provide health instruction to the experimental group regarding diet and drug in hypertension using planned lessons.
3. Evaluate the effectiveness of health instruction by giving a post test to both the groups.
4. Compare the results of the experimental and control group.

HYPOTHESIS

H1-There will be a significant difference in the pre and post test knowledge of patients in both the groups.

H2-The mean post test knowledge of the experimental group will be significantly higher than the mean post test knowledge of the control group.

H3. There will be a significant association between the post test level of knowledge with the selected demographic variables.

LIMITATIONS: The study is limited to

1. The hypertensive patients admitted to a medical ward of selected hospital in Bangalore.
2. The patients who are willing to participate in the study.
3. The findings cannot be generalized to a bigger population because of the smaller sample size.
4. The instruction is limited to only two areas i.e. diet and drugs in hypertension.
5. Patients who are admitted in the wards for the first and the second time with the problem
6. Patients who are admitted for a minimum of 5 days in the ward.

CONCEPTUAL FRAME WORK

The conceptual framework used for the study was based on Orem's self-care theory.

REVIEW OF LITERATURE

The review of literature is an essential step in the development of a research project. It gives an insight into the various aspects related to the study. A review helps the investigator to find out what was done previously on the problem, what remains to be done, what is still unknown and untested, what methods have been employed in other research and how the results of other research in the area can be combined to develop knowledge. It also helps in directing ways to increase the effectiveness of the data analysis and interpretation. Keeping this in view, a review of literature has been undertaken.

Joseph M.Toner and Lawrence E Ramsay (1990) conducted a study on the factors related to the treatment resistance in hypertension. They found out hypertension which is resistant to treatment carries a relatively bad prognosis. Factors associated with the treatment resistance were examined and it was suggested that prevalence of accelerated phase hypertension, renovascular disease, impaired renal function, cigarette smoking and the combination of smoking and heavy caffeine use were greater in patients with resistant hypertension. These findings concluded that cigarette smoking and high caffeine intake has a harmful effect on health.

Dee J Trottier and Mahender S Kochar (1992) conducted a study on "Hypertension and high cholesterol-a dangerous synergy, says that always at the top of the roster of risk factors for coronary artery disease is hypertension and high cholesterol. One of the foremost challenges of the hypertension-

hypercholesterolemia combination is the calculated risk of drug treatment. Here the author says that antihypertensive drugs don't have the effect of reducing the incidence of coronary artery disease, whereas dietary changes, exercise and avoidance of smoking and alcohol can reduce the incidence of coronary artery disease.

Dr Jayarajan (1993) conducted a study regarding “Borderline hypertension :to treat or not to treat”, says that education of patients with borderline hypertension should be asked to lose weight ,as obese people have a higher blood pressure when compared to slim people. Other measure he suggested that in order to control high blood pressure are avoidance of high animal fat intake, restriction of dietary sodium to 4-6 gms/day, avoidance of processed food and reducing dairy products. Exercise i.e. walking 1KM/day and gradually jogging with walking 2KMS/day gives relief from stress of city life. He also says, alcohol intake must be limited to 2 pegs. Avoiding smoking and caffeine intake should take care of the risk factors like hyperlipidemia and diabetes. So this study concludes that education regarding diet and risk factors are important in reducing high blood pressure.

RESEARCH METHODOLOGY

A quasi experimental, four celled design was used in the study. The study was conducted in the medical wards of a selected hospital at Bangalore. Samples of 30 patients who were having hypertension which is associated with cardiac diseases and who fulfilled the criteria were selected for the study. The sampling technique was a purposive sampling of heterogeneous type consisting of 15 patients in the experimental group and another 15 in the control group who were chosen randomly.

CRITERIA FOR SELECTING THE SAMPLE

1. Patients who were admitted with hypertension which is associated with cardiac problem for the first and second time to the hospital.
2. Those who were willing to participate in the study.
3. Samples from both sexes were included.
4. Age group was between 15-75 years.

DESCRIPTION OF THE TOOL

The tool comprised of two sections:

Section A: It consisted of demographic variables such as age, sex, marital status, education, occupation, food habits, place of living, vices like smoking, alcoholism or tobacco chewing, and whether first or second time admission.

Section B: It consisted of a structured interview schedule which had 45 closed ended questions to be answered “yes, no or don't know”, selected from the three lessons which had been taught to the patients.

RESULTS

In order to assess the knowledge of patients regarding diet and drug in hypertension, the investigator administered pre and post test to both the groups to assess the effectiveness of teaching. The scores were analyzed by applying 't' test. The test result showed that there is significant difference between the pre test and post knowledge at 5% level of significance. Post test score of experimental group was much better than the post test scores of control group.

In order to ascertain whether the health instruction given was effective the investigator used different averages and partition values (different quartiles) in both the control and experimental groups and ogives were plotted for both pre and post test in both groups.

It was found that the difference between the means of both pre and post tests of control group was 2.3 and the difference between Q1 of the pre test and post test was 3. Similarly the difference between the median of the pre and post test was 1.8 and the difference between the Q3 of the pre and post test was 1.

Mean and partition values of pre and post test in control group.

	Pre Test	Post Test	Difference	
			Number	%
Mean	24.93	27.23	2.3	5.11
Q1	23	26	3	6.67
Median	25	26.8	1.8	4
Q3	25.8	27.4	1.6	3.56

It was found that the difference between the means of both pre and post tests of experimental group was 15.9 and the difference between Q1 of the pre test and post test was 16.4 .Similarly the difference between the median of the pre and post test was 17 and the difference between the Q3 of the pre and post test was 15.2.

Mean and partition values of pre and post test in Experimental group.

	Pre Test	Post Test	Difference	
			Number	%
Mean	24.23	40.13	15.9	35.33
Q1	22.4	38.8	16.4	36.4
Median	24	41	17	37.78
Q3	26.6	41.8	15.2	33.78

The research data shows that improvement of the percentage of score of the mean in the control group was 5.11%and the experimental group was 35.33%.Improvement of percentage score of Q1 in the control group was 6. 67% and the experimental group was 36.4%.Improvement of percent score of median in the control group was 4%and in the experimental group was 37.78%.Improvement of percent score of Q3in control group was 3.56%and in the experimental group was 33.78%.It shows that the post test score in the experimental group was significantly higher than the post test score in control group. This research data shows that the health instruction given was effective.

CONCLUSIONS

The main purpose of this experimental study was to equip the patient with sufficient knowledge relating to diet and drugs in hypertension so that they may be able to obtain optimum potential within their limited capacity and thus maintain an optimum level of health. The findings of the study revealed that if patients admitted with hypertension associated with cardiac problems, were given health instruction, they would definitely have a higher level of knowledge. The findings of the study help to draw the following conclusions.

- *If the patients with hypertension are trained adequately they can involve themselves in their activities of daily living and can take care of themselves.
- *Nurses can include the teaching program into their work schedule as they have proved it effective.
- *Information and training given in the hospital will percolate to public and help patient at home.
- *This health instruction programme will also help the patients cope with discharge and makes readmission less.

RECOMMENDATIONS

- *A similar study can be conducted on larger groups for generalization.
- *Similar study could be conducted through video teaching methods on management of hypertension.
- *A health instruction manual consisting of means and ways of preventing hypertensive diseases can be helpful to patients admitted with this problem to help them take care of themselves.

*An in-service education program for nurses could be conducted to help them improve their knowledge in nursing care of patients admitted with hypertensive problems.

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