

A Study to Evaluate the Effectiveness of Health Education Programme on Management of Hypertension for Hypertensive Clients in Terms of Knowledge, Compliance and Life Style in Khan Ahmedpur Village of District Ambala, Haryana

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Abstract: *An experiment study was conducted to evaluate the effectiveness of health education programme on management of hypertension for hypertensive client in terms of knowledge, compliance and life style in Khan Ahmedpur village of district Ambala, Haryana. A sample comprised of 30 hypertensive clients were selected purposively. The tools used for data collection were structured knowledge interview schedule, compliance rating scale and life style rating scale. Data analysis was done by using descriptive and inferential statistics. Finding of the study revealed that mean post test knowledge scores was significantly higher than the mean pre test knowledge scores, the mean post test compliance scores was significantly higher than the mean pre test compliance scores and the mean post test life style was significantly higher than the mean pre test life style scores of hypertensive clients. There was no significant association of post test knowledge, compliance and life style scores of subjects irrespective of demographic variables of hypertensive clients. Study concluded that the health education programme was effective in terms of enhancing knowledge, compliance and life style of hypertensive clients.*

Keywords: Effectiveness, Health Education Programme, Management of Hypertension, Knowledge, Hypertensive Clients, Compliance, Life Style.

1. Introduction

Chronic Non-Communicable diseases are assuming greater importance among adult population in developed as well as developing countries. The prevalence of chronic diseases such as hypertension, diabetes mellitus etc, is showing an upward trend in most countries. The main factors responsible for this rising trend are changing life styles, obesity, and behavior pattern of people etc.¹

Hypertension (HTN) is an “ice berg” disease. It became evident in the early 1970s that only about half of the hypertensive subjects in the general population in the most developed countries were aware of the condition, only about half of those aware of the problem were being treated.²

HTN is a major public health problem of worldwide distribution and is the most common cardiovascular disease (CVD) risk factor. It is responsible for one half of coronary heart disease (CHD) and about two thirds of cerebrovascular accidents. They account for nearly a third of all deaths worldwide. By 2030, 23 million cardiovascular deaths are projected to have HTN, with about 85% occurring in low and middle- income countries. Prevention of HTN is possible, and early detection and treatment can reduce the incidence of complications including stroke, CHD, heart failure, and kidney disease, and yet the levels of control of hypertension are low worldwide. Economically developed

countries have higher rates of HTN than in developing countries. However, data reported in the last decade indicate that the prevalence, awareness, treatment, and control of hypertension in economically developing countries are coming closer to those in economically developed countries.³

The prevalence of hypertension in India is low compared to world figures. In India, 23.10 per cent men and 22.60 per cent women over 25 years old suffer from hypertension, says the World Health Organisation’s ‘global health statistics 2012’. Increased blood pressure is a high-risk condition that causes approximately 51 per cent deaths from stroke and 45 per cent from coronary artery disease in India. Hypertension was directly responsible for 7.5 million deaths in 2004 — 12.8 per cent of the total global deaths.⁴

According to Indian studies it is noted that the prevalence of hypertension has increased by 30 times among the urban population over a period of 55 years and about 10 times among the rural population over a period of 36 years.

Hypertension is defined as a systolic blood pressure greater than 140 mm Hg and a diastolic pressure greater than 90 mm Hg over a sustained period. Hypertension is divided in to two main categories i.e., Primary hypertension and secondary hypertension. Primary hypertension occurs between 90% and 95 % of the cases and has no identifiable

cause, while secondary hypertension occurs in the remaining 5 % to 10 % cases and has identified causes.⁶

The objectives of the study were; To assess and compare the knowledge, compliance and life style of hypertensive clients before and after administration of health education programme on management of hypertension; to determine the relationship between knowledge, compliance and lifestyle of the hypertensive clients; to determine the association of levels of knowledge, compliance and life style of hypertensive clients after administration of health education programme with selected variables.

2. Review of Literature

The reviewed literature related to the study is organized under; knowledge, compliance and life style of hypertensive clients regarding management and health education programme for hypertensive clients regarding management of hypertension. A community based study was done on awareness, treatment and control of hypertension in rural areas. Study findings shows that hypertension was more in males than females and only 33.8% were aware of their hypertensive status.⁷

A cross sectional study was conducted on compliance of hypertensive clients. The findings of the study revealed that compliance rate was 54.6%. statistically significant associations were found between compliance rate and old age, female gender, long history of disease, knowledge of using medication, practicing of life style modifications.⁸

A study was conducted on health education; an effective intervention on hypertensive patients in urban slums in Mumbai. Findings of the study reveal the knowledge attitude and practices improved in terms of self care practices and life style modification factors.⁹

3. Methodology

An experimental research approach and one group pre test – post test design was used. Total sample of study was 30 hypertensive clients from >20 -60 years. Purposive sampling technique was used to select the adequate size of sample in Khan Ahmedpur village of District Ambala, Haryana. The independent variable of the study was the health education programme on management of hypertension. Health education programme was administered to enhance hypertensive clients’ knowledge regarding hypertension, compliance and life style. The dependent variables under study were Knowledge, Compliance and Life Style of Hypertensive Clients. Tools for the present study were constructed by the researcher. It comprised of 12 items which were designed to obtain demographic information such as age, gender, marital status, religion, education, occupation, family income, dietary habits, type of family, family history of hypertension and treatment of hypertension. Structured knowledge interview schedule was developed to assess the knowledge of hypertensive clients regarding management of hypertension comprised of 35 items. Compliance rating scale was developed to assess the compliance of hypertensive clients regarding management of hypertension comprised of 15 items. Life style rating scale

was developed to assess the life style of hypertensive clients to management of hypertension comprised of 10 items. Health education programme was prepared. Validity was ensured in consultation with guides and experts in the field of nursing and preventive and social medicine. Reliability of The reliability coefficient for the Structured Knowledge Interview Schedule were calculated using Kuder-Richardson - 20 (KR₂₀) formula and Cronbach Alpha. The pilot study was conducted for checking the feasibility of the study.

4. Result

For analysis and interpretation of the data descriptive and inferential statistics were used. Data analyzed for statistical significance using paired “t” test and hypotheses tested at 0.05 level of significance.

Table 1: Range, Mean, Median and Standard Deviation of Pre Test and Post test Knowledge Scores of Hypertensive Clients on Structured Knowledge Interview Schedule, N=30

Knowledge Test	Range of obtained Score	Mean	Median	SD
Pre Test	9-18	11.83	11	1.93
Post Test	13-23	19.97	20	2.14

The data presented in the Table I reveals that the mean pre-test knowledge score (11.83) was lower than mean post test knowledge scores. Findings also shows that standard deviation of pre test knowledge score (1.93) and standard deviation of post test knowledge score (2.14).

Table 2: Mean, Mean Difference, Standard Deviation Of Difference, Standard Error of Mean Difference from Pre Test to Post test Knowledge Score on Structured Knowledge Interview Schedule and t value, N=30

Knowledge Test	Mean	Mean _D	SD _D	SE _{MD}	t value
Pre Test	11.83				
		8.14	2.81	0.50	15.83*
Post Test	19.97				

t (29) = 2.04 * significant (p ≤ 0.05)

Data presented in Table 2 shows that the mean pre test knowledge score(11.83) was lower than mean post test knowledge score (19.97) with a mean difference of 8.14 and computed t value comes out to be 15.83 which is significant at 0.05 level of significance.

Thus, it is established that the difference obtained in the mean pre test and post test knowledge score was true difference and not by chance. Hence, null hypothesis H₀₁ was rejected and research hypothesis H₁ was accepted which indicates that the health education programme was effective in enhancing knowledge of hypertensive clients regarding hypertension

Table 3: Mean, Median, Standard Deviation, Range of Possible Scores and Range of Compliance Scores obtained by Hypertensive clients, N=30

Compliance Score	Range of obtained Score	Mean	Median	SD
Pre Test	20-32	28.37	29	3.14
Post Test	30-44	36.43	37	2.99

Maximum Score: 45, Minimum Score: 15.

The data presented in the Table 3, shows that standard deviation of pre test compliance score (3.14) and standard deviation of post test compliance score (2.99).The data presented in the Table 3 reveals that the mean pre-test compliance score (28.37) was lower than mean post test compliance scores (36.43).

Table 4: Mean , Mean Difference , Standard Deviation Of Difference, Standard Error of Mean Difference from Pre Test to Post test compliance Score and t value, N=30

Knowledge Test	Mean	Mean _D	SD _D	SE _{MD}	t value
Pre Test	28.37				
		8.06	4.16	0.87	10.62*
Post Test	36.43				

t (29) = 2.04 * significant (p≤ 0.05)

Data presented in Table 4 shows that the mean compliance score (28.37) was lower the mean post compliance score (36.43) with a mean difference of 8.06 and computed t value comes out to be 10.62 which is significant at 0.05 level of significance

Thus, it is established that the difference obtained in the mean pre test and post test knowledge score was true difference and not by chance. Hence, null hypothesis H₀₂ was rejected and research hypothesis H₂ was accepted. It indicates that the health education programme on hypertension was an effective method in improving compliance of hypertensive clients.

Table 5: Range, Mean, Median, Standard Deviation of Pre Test and Post Test Life Style Rating Scale Scores obtained by Hypertensive clients, N=30

Life Style Test	Range of obtained Score	Mean	Median	SD
Pre Test	16-25	20.47	21	1.94
Post Test	22-29	25.40	26	1.56

Maximum Score: 30 Minimum Score: 10

The data presented in the Table 5 reveals that the mean pre-test life style score (20.47) was lower than mean post test life style scores. Findings also shows that standard deviation of post test lifestyle score (1.56) and standard deviation of pre test lifestyle score (1.94).

Table 6: Mean , Mean Difference , Standard Deviation Of Difference, Standard Error of Mean Difference from Pre test to Post test Life Style Score and t value, N=30

Knowledge Test	Mean	Mean _D	SD _D	SE _{MD}	t value
Pre Test	20.47				
		4.93	1.68	0.43	16.08*
Post Test	25.40				

t (29) = 2.04 * significant (p≤ 0.05)

Data presented in Table 6 shows that the mean pre test life style score was (20.47) lower than mean life style post score (25.40) with a mean difference of 4.93 and computed t value comes out to be 16.08 which is significant at 0.05 level of significance

Thus, it is established that the difference obtained in the mean pre test and post test knowledge score was true difference and not by chance. Hence, null hypothesis H₀₃ was rejected and research hypothesis H₃ was accepted. It

indicates that the health education programme on hypertension was an effective method for improving life style of hypertensive clients.

Table 7: Correlation Matrix between Knowledge Scores, Compliance Scores and Life Style Scores Obtained by Hypertensive Clients, N=30

Correlation Matrix		Pre Test Compliance Score	Pre Test Life Style Score
Pre Test	Knowledge Score	0.398*	0.478*
	Compliance Score		0.119
Post Test		Post Test Compliance Score	Post Test Life Style Score
	Knowledge Score	0.092	0.067
	Compliance Score		0.104

r (28) = .361, * significant (p≤ 0.05)

Data presented in table 7 reveals that there is significant correlation was found between pre test knowledge score with pre test life style score (r) = .478 and moderate non significant correlation of post test knowledge score with post test life style score (r) = .067 , significant correlation of pre test knowledge score with pre test compliance score (r) = .398 and moderate non significant correlation of post test knowledge score with post test compliance score (r) = .092 and pre test compliance score with pre test life style score (r) = .119, post test compliance score with post test life style score (r) = .104. Study concluded that the health education programme was effective in terms of enhancing knowledge, compliance and life style of hypertensive clients.

Thus, the null hypothesis H₀₄ was partial accepted and research H₄ was partial rejected indicating knowledge, compliance and lifestyle related to hypertension are not consistent with each other.

5. Discussion

The purpose of this study was to evaluate the effectiveness of health education programme on management of hypertension clients in terms of knowledge, compliance and life style. In the present study, mean post test knowledge score (19.97) was higher than the mean pre test knowledge score (11.83). Nearly similar types of findings were reported by **Wendy Zernike** in his study i.e. the mean valued obtained to comparison of pre test and post test group revealed a significant increases in knowledge level after received a structured education programme.

The t value was computed to determine the significance of the difference between the mean of pre test and post test knowledge scores. The computed t value, t (29) = 15.83 In In the present study, the mean percentage post test compliance (36.43) and mean percentage of pre test compliance is (28.37), suggesting the effectiveness of Health Teaching Programme which is supported by **S. Palanisamy** et al in his longitudinal study that after 6 month of intervention (multi layered educational component) the percentage of patients classified as complaints increased significantly from 0% at base line to 95.4% at final interview with associated modest reduction in mean blood pressure.

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Sudhakar Dayalan showed similar results by .t. calculated value = 22.22 is greater than the .t. table (39) = 1.68, $p < 0.05$. Is statically significant at 0.05 level .Hence planned teaching programme was found to be an effective method in increasing the knowledge of hypertensive clients. $P = 0.005$ indicates significant difference between the pre test knowledge scores and post test knowledge scores. In the present study, mean post test life style score (25.40) was higher than the mean pre test life style score (20.47). Nearly similar types of findings were reported by **Fawzy Sharaf** in his study i.e. the base line and end line survey were conducted. The mean value obtained in the post test relation to life style were higher than pre test score respectively.

6. Conclusion

The main aim of the study was to evaluate the effectiveness of health education programme on management of hypertension for hypertensive clients in terms of knowledge, compliance and life style. The findings of the study revealed that the mean post test knowledge scores were significantly higher than pre test mean knowledge scores. The mean post test compliance score (36.63) were significantly higher than the mean pre test compliance score. The mean post test life style scores were significantly higher than pre test mean life style scores. There was a significant positive relationship between pre test knowledge, compliance and life style score. The findings of the study have several implications for nursing services, education, administration and research.

7. Future Scope

Nursing personnel working in clinical setting as well as in the community should practice health education as an integral part of nursing profession. Scheduling of health education programme in the clinical set up on the fixed days in a fixed time for the clients as well as to the family members. The findings of the study also be used by community practitioner for preparing small booklet and instruction papers to the clients/family members in understandable language with appropriate pictures and explanation to improve their knowledge life style practices create awareness among the hypertensive clients that would be further beneficial to the patients for self management of hypertension.

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