Efficacy Of Garlic Intake On Blood Pressure In Patients With Various Cvd Related Factors.

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Abstract

The likelihood of developing cardiovascular disease and stroke is increased by hypertension. After diagnosing the patient has hypertension, clients should have their blood pressure examined every two weeks for alterations in systolic and diastolic pressure and take the necessary precautions to avoid and lessen their risk of developing life-threatening chronic conditions. Lifestyle changes in dietary pattern can conserve certain traditional home remedial measures which are used to maintain an intact blood pressure level.
The current study is aimed to assess the effectiveness of a garlic pills (**Allium Sativum**) among hypertensive hospital employees in selected hospitals at Pathanamthitta Dist, Kerala.

Objectives:
- ✓ To evaluate the hospital staff's baseline data for hypertension.
- ✓ To assess the efficacy of adjuvant therapy for garlic pills in hypertensive hospital staff.
- ✓ Discover the relationship between the posttest and chosen demographic factors.

Hypotheses:
These hypotheses was tested at the 0.05 level of significance
- **H1:** The mean post interventional clinical variables were significantly lower than the mean pre intervention among hypertensive employees.
- **H2:** There was a significant association between the post test and selected demographic variables.

Conceptual framework: Von Bertanlanffy's General System Theory
Research design: Pre Experimental one group Pretest- Posttest design
Population: Hospital employees with prehypertension who were aged between 25-65 years
Sample size: The sample size were 100
Sampling: Convenience Sampling Technique
Setting: Selected Hospitals at Patahanamthitta district, Kerala
Tool: Demographic variables and clinical parameters

Data collection: They were instructed to take 500mg of garlic pills once a day before breakfast for three months after being identified as hypertensive hospital staff by screening utilizing a sphygmomanometer and clinical criteria, primarily the Lipid Profile. The entire data collection process took six months to complete.

Data analysis: Descriptive statistics such as mean, mean percentage and standard deviation were used to describe demographic characteristics. Inferential statistics used were Paired test for comparing the pre and post test of blood pressure level. Chi-square test was adapted to find the association between pre and post test blood pressure level after the intervention of garlic pills.

Major findings of the study: The study identified that the mean difference in systolic BP was 13.69, diastolic pressure was 10.96 & VLDL is 18.63 and Triglycerides was 28.14. The mean difference was increased with 16.85. The difference was statistically significant at $P < 0.05$. So the study suggests that there was an association of post test scores with selected demographic variables like gender, marital status, education, type of work, working hours per day, height, weight, BMI, dietary pattern, salt intake, life style practices, exercise and leisure time activity. The study proved that garlic pill was effective and maintains the blood pressure among employees with hypertension.

Keywords: Garlic pills, Hypertension, Triglycerides, cardiovascular disease.
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Introduction:

The main cause of death and disability in the United States, other industrialized countries, and an increasing number of developing countries is cardiovascular disease. Hypertension is defined as a systolic blood pressure greater than 140 mm of Hg and a diastolic blood pressure greater than 90mm/Hg based on the average of two or more correct blood pressure measurements taken during two or more contacts with a health care provider[2]. Patients with hypertension run the risk of developing retinopathy, renal failure, accelerated coronary artery disease, heart attack, heart failure, and stroke[3].

High blood pressure often has no symptoms. Over time, if untreated, it can cause health conditions, such as heart disease and stroke. Eating a healthier diet with less salt, exercising regularly and taking medication can help lower blood pressure. It is a silent killer disease as the symptoms rarely appear in early stages until an occurrence of a medical crisis like heart attack, shock or Chronic Kidney Diseases[1]. Although hypertension in not a medical condition but people with hypertension are at more risk of developing other complications.

Garlic is an herbal supplement which can be used for coronary artery disease (CAD) cancer circulation (enhancement), Helicobacter pylori infection, high lipids in the blood (hyperlipidemia), high blood pressure (hypertension), immune stimulant, menstrual disorders, tick repellant, and fungus (tinea) infections. Overall garlic has been shown to be "modestly" effective in decreasing serum cholesterol.Garlic is demonstrated to lower systolic and diastolic blood pressure[6].The most reliable research has found that intake of garlic as a food or supplement is not associated with a reduced risk of developing gastric cancer. However, epidemiologic studies suggest a link between higher intakes of vegetables in the garlic family (which includes onions, shallots, chives, and leeks as well as garlic) and lower risks of certain cancers, particularly gastrointestinal cancers

Statement Of The Problem

Efficacy of garlic intake on blood pressure in patients with various cvd related factors.

Objectives:

✓ To evaluate the hospital staff's baseline data for hypertension.
✓ To assess the efficacy of adjuvant therapy for garlic pills in hypertensive hospital staff.
✓ Discover the relationship between the posttest and chosen demographic factors.

Hypotheses:

These hypotheses was tested at the 0.05 level of significance

- **H1:** The mean post interventional clinical variables were significantly lower than the mean pre intervention among hypertensive employees.
- **H2:** There was a significant association between the posttest and selected demographic variables.

Assumptions:

- Their enthusiasm in the profession will be further increased through nursing interventions tailored to the needs of the patients.
- Hypertensive hospital workers wouldn't have any trouble taking garlic pills at home.
- Regular intake of garlic pills (500 mg) lowers blood pressure and guards against the development of hypertension in cardiovascular disease patients.
- Garlic supplements have no negative side effects.
- It is believed that participants in this study will do so voluntarily.

Delimitations of the study:

- The study only includes participants with hypertension who works in the predetermined hospital settings.
- A total of 6 months are allotted for the investigation.
- There is a maximum sample size of 100 people.

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Research Approach

Planning an action for the intervention of objectives is done using the research design.
This study adapts the Pre Experimental one group Pretest- Post-test design.

O1	X	O2

O1: Before giving out garlic tablets, clinical factors including lipid profile level and blood pressure should be checked.
X: Consumption of garlic pills (500 mg), which includes directions and recommendations for doing so.
O2: Assessing the post interventional blood pressure level after the initial intake of garlic pills.

Variables:

Independent Variable:

Garlic Pill has been used here as independent variable.

Dependent Variable:

In this research the dependent variables are hypertensive hospital employees.

Analysis:

All of the data were gathered and brought to the master coding sheet, and facts were constructed to pursue them. Using the proper picturesque and derivable statistics, these data were examined, tabulated, and evaluated.

Organization Of The Data:

The gathered information was tallied, examined, and then interpreted. The results were then presented in the form of tables and diagrams under the sections that follow.

- Information on hypertensive individuals' demographic characteristics in Section A:
- Data on the impact of garlic supplements on clinical characteristics among hypertensive hospital staff are presented in Section B.
- Information on the correlation between the post-test and a particular demographic factor which has been mentioned in section c.

The Frequency Distribution Of Demographic Factors Among Hypertensive Hospital Staff Is Shown In Table 1
N= 100

S.NO	DEMOGRAPHIC VARIABLE	FREQUENCY	PERCENTAGE
1	SECTION –A IDENTIFICATION OF DATA Age (years)		
	a. (25-35)	34	34
	b. (36-45)	46	46
	c. (46-55)	7	7
	d. (56-65)	3	3
2	Gender		
	a) Male	67	67
	b) Female	33	33
3	Marital status		
	a. (Married)	65	65
	b. (Unmarried)	14	14
	c. (Widow/Widower)	8	8
	d. (Separated)	3	3
4	Religion		
	a. (Hindu)	48	48
	b. (Muslim)	34	34
	c. (Christian)	18	18
5	Type of family		
	a. (Nuclear Family)	35	35
	b. (Joint family)	60	60
	c. (Extended family)	05	05
6.	Educational status		
	a. (Primary)	07	07
	b. (Secondary)	22	22
	c. (Higher Secondary)	36	36
	d. (Collegiate)	35	35

Table 1 depicts the ilustratious percentage of clients with in the age group 46% of the people were in the age group of 45-65 years of age and 67% of them were female and 48% were considered to be hindu and predominace of the clients were married which is about 65%. Most of the clients were considered as joint family which is about 60% and most of them qualified upto higher secondary which is 36%.

Association of Type of work and the post test scores of Triglycerides N=100

Type of work	Tri glycerides		Chi square	Df	P value
	Upto 170	Above 170			
Sedentary	14	4	5	2	.044
Moderate	35	23			
Heavy	17	2			

According to the table, the triglyceride levels in 14 (14%) and 4 (4%) were both up to 170 mg/dl. With moderate work, 35 (35%) samples had 170 mg/dl, and 23 (23%) had more than 170 mg/dl. With intensive work, 17 (17%) samples had 170 mg/dl and 2 (2%), more than 170 mg/dl.The calculated chi square value is 5, and the significance level is.044.

Discussion:

Study has been properly classified and dividing up results which has been given below,

- The percentage distribution between the experimental and control groups in

hypertensive hospital employees and the consistency of clinical parameters.

- The study's conclusions shed light on the possibility of using garlic tablet therapy to help hypertensive individuals maintain a healthy blood pressure level.
- The research findings help nursing staff to manage patients with hypertensive clients by incorporating garlic therapy as a complementary nursing intervention.
- Garlic therapy to be administered to all hypertensive patients.
- Relationship between the intake of garlic pills perception during the hypertensive clients among the control and experimental groups
- Regularity and percentage distribution of garlic pills in the experimental group of hypertensive hospital employees.

Conclusion:

The conclusion drawn from this present study was that in post test most of the samples had 52% mild hypertension and 47% had moderate hypertension. The mean difference in systolic BP is 13.69, diastolic pressure is 10.96,LDL is 20.49 VLDL is 17.64 and Triglycerides is 39.23 the mean difference is increased with 16.85.After the administration of garlic pill, the clients become familiar and found themselves comfortable and expressed satisfaction and they shared their experiences with the family members and others. They recommended others to follow the same. This ensures that administration of 500 mg of garlic pill every day helps to reduce the clinical profiles on BP among prehypertensive hospital employees and also it will help to reduce morbidity and mortality rate of employees with high blood pressure to live a healthy life.

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