

A PRE-EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF AN INFORMATION BOOKLET ON LIFESTYLE MODIFICATION IN ENHANCING KNOWLEDGE AND ATTITUDE TOWARDS THE PREVENTION OF PERIPHERAL VASCULAR DISEASE AMONG MIDDLE-AGED INDIVIDUALS IN A SELECTED HOSPITAL OF GANDHINAGAR DISTRICT, GUJARAT.

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Abstract

INTRODUCTION:- Cardiovascular disease also called heart disease is a class of diseases that involve the heart, the blood vessels (arteries, capillaries, and veins) or both. Cardiovascular mortality rates have declined in many high-income countries. Cardiovascular disease remains a significant public health concern, but proactive prevention strategies can help reduce its prevalence. By focusing on lifestyle modifications and early intervention, individuals and healthcare systems can work together to combat this growing health challenge.

OBJECTIVE:-

- To assess the pre-test and post test knowledge regarding lifestyle modification in prevention of peripheral vascular disease.
- To assess the pre-test and post test attitude regarding lifestyle modification in prevention of peripheral vascular disease.
- To evaluate the effectiveness of information booklet regarding lifestyle modification in prevention of peripheral vascular disease.
- To find out the association between knowledge and attitude with their socio demographic variable.

METHODOLOGY: The research design selected for the study was pre-experimental one group pre-test, post test design. This design is widely used in

educational research. This study intended to measure the gain in knowledge and attitude scores regarding the lifestyle modification to prevent peripheral vascular disease among middle age person.

MAJOR FINDINGS OF THE STUDY A study on middle-aged individuals revealed that the highest proportion, 47 (39.17%), were in the 30-35 age group. The majority were male, comprising 64 (53.33%) of the participants, and 68 (56.67%) were married. Regarding educational qualifications, 49 (40.83%) were graduates. In terms of occupation, 50 (41.67%) were classified as moderate workers. An assessment of their pre-test knowledge about lifestyle modifications for preventing peripheral vascular disease showed that 76 (63.33%) had an average score, 42 (35.00%) had a poor score, and only 2 (1.67%) had a good score. However, after receiving an informational booklet and participating in a post-test, all 120 (100%) participants achieved an excellent score, indicating a significant improvement in their knowledge.

CONCLUSIONS: The lifestyle modification for prevention of peripheral vascular disease was studied in this study in relation to various demographic variables. It is concluded from the study findings that there are large number of middle age person who have lack of knowledge and attitude regarding lifestyle modification for prevention of peripheral vascular disease, henceforth there is a constant need of awareness regarding better lifestyle.

KEY POINT: *Peripheral Vascular Disease, Lifestyle Modification, Middle Age Person, Self Structured Questionnaire*

Introduction: Evidence suggests a number of risk factors for heart diseases: age, gender, high blood pressure, hyperlipidemia, diabetes mellitus, tobacco smoking, excessive alcohol consumption, sugar consumption, family history, obesity, lack of physical activity, Psychosocial factors, and air pollution. Some of these risk factors, such as age, gender or family history, are immutable; however, many important cardiovascular risk factors are modifiable by lifestyle change, social change, drug treatment and prevention of Serrano's Cardiac Triad: hypertension, hyperlipidemia, and diabetes. Aging is also associated with changes in the mechanical and structural properties of the vascular wall, which leads to the loss of arterial elasticity and reduced arterial compliance and may subsequently lead to coronary artery disease. Men are at greater risk of heart disease than pre-menopausal women. Among middle-aged people, coronary heart disease is 2 to 5 times more common in men than in women. Among men and women, there are notable differences in body weight, height, body fat distribution, heart rate, stroke volume, and arterial compliance.

REVIEW OF LITERATURE

The review of literatures has been organized under the following headings:-

1. Literature reviews related to the prevalence of Peripheral Vascular Disease.

2. Literature reviews related to the Lifestyle modification.
3. Literature reviews related to the prevention and management of Peripheral Vascular Disease.
4. Literature reviews related to the information booklet

G. Premalatha (2014) The study highlights a 3.2% overall prevalence of Peripheral Vascular Disease (PVD) in a South Indian population, with a significantly higher prevalence among individuals with diabetes (6.3%), particularly those with known diabetes (7.8%). PVD was uncommon until middle age, after which its prevalence increased sharply. Among the various risk factors analyzed, age (≥ 50 years) emerged as the most significant predictor of PVD, followed by hypertension, while smoking and serum lipid levels showed no significant association. These findings underscore the importance of early screening, lifestyle modifications, and preventive measures to reduce the burden of PVD, especially among high-risk groups such as older adults and individuals with diabetes.

Khurana Ashok (2013) conducted a study to determine the prevalence of peripheral arterial disease in type 2 diabetes mellitus using the ankle-brachial pressure index and to educate the patients regarding risk factor modification and importance of early intervention to prevent future 200 patients aged more than 40 years,. A ratio of the highest blood pressure from the posterior tibia or pedal arteries of each leg to the highest blood pressure from the brachial

arteries < 0.9 was considered abnormal. Abnormal ABIs were found in 33% (66/200) patients with type 2 diabetes mellitus. 45.5% patients had ABI 0.80 - 0.89, 33.3% patients had ABI 0.50 - 0.79, and 21.2% patients had ABI < 0.5 . Prevalence of peripheral vascular disease in type 2 diabetes mellitus is on rise in northern India. Determination of prevalence of peripheral vascular disease in type 2 diabetes mellitus using ankle brachial index and to educate the 200 selected patients aged more than 40 who were admitted in medicine department, to prevent from peripheral vascular disease. This showed that there is rise in prevalence rate of PVD among northern India.

Harduarsingh (2014) conducted a study to assess the aging and obesity increase the risk for mobility limitations in women. The effects of a 6-month period of either weight loss (WL) alone or of aerobic exercise (AEX) plus WL (AEX+WL), on trunk body composition, as measured by dual-energy X-ray absorptiometry (DXA) and computed tomography (CT) was determined in 65 overweight and obese postmenopausal women (aged 50-76 years). Both the spinal and abdominal muscle areas were related to the maximal oxygen uptake (VO_{2max}) ($P < 0.05$).

Methodology: The **pre-experimental study design** is useful for assessing the effectiveness of an intervention by comparing pre-test and post-test results within a single group. The findings help determine the impact of the intervention on participants' knowledge, attitudes, or behaviors.

Sampling:

Sample comprised of 120 middle age person those who visited the OPD's, ward, ICU'S of selected hospitals. In this study the samples were selected through a non probability convenient sampling technique.

Inclusion Criteria:

- Both male and female middle age person will be included in the study.
- Those middle age person who are between the age group of 30-50 years.
- Those who visit in hospital.
- Those who understand English and Hindi language.
- Those who are willing to participate in the study.

Data Collection Procedure:

The investigator obtained written permissions from the concerned authority prior to data collection.

- Written consent from the subject was taken and they were made assured about the confidentiality of the results.
- The subjects were given the self structured questionnaire regarding knowledge and likert scale regarding attitude for lifestyle modification in a view of prevention of Peripheral Vascular Disease.
- Information Booklet was given to the middle age person
- The post-test was conducted on the 7th day after the pre-test to evaluate the effectiveness Information

Booklet by using the same tool as used for pre-test.

- The demographic analysis of the study participants revealed that the majority (39.17%) belonged to the 30-35 years age group, followed by those in the 46-50 years group (23.33%). The study also observed a higher proportion of males (53.33%) compared to females (46.67%), indicating a slight male predominance.
- Education: The majority (40.83%) were graduates, followed by 30.83% with higher secondary education. A smaller proportion (12.50%) had postgraduate degrees, indicating that most participants had received formal education.
- Work Nature: Most participants (81.67%) were engaged in active work, with 41.67% classified as moderate workers and 40.00% as heavy workers, while only 18.33% had sedentary jobs.
- Employment Status: A significant proportion (79.17%) were employed, while 20.83% were unemployed.
- Socio-Economic Status: The majority (76.67%) belonged to the middle socio-economic class, with 15.00% in the high class and 8.33% in the lower class.
- Income Level: Most participants (74.17%) had a family income between Rs. 10,001 to Rs. 40,000, with 56.67% earning between Rs. 10,001-20,000 per month.

- Residence: A large proportion (70.00%) resided in urban areas, whereas 30.00% were from rural areas.

Section II: The Pre-Test and Post-Test Knowledge Score and Effectiveness of Information Booklet Regarding Lifestyle Modification in Prevention of Peripheral vascular Disease.

Comparison between Pre-test and Post-test Knowledge Score

(N=120)

S . No .	Knowle dge Score	Pre-test Score		Post-test Score	
		Freq uenc y	Per cen tag e	Fre que ncy	Per centa ge
1.	Poo r (- 7)	42 0	35. 00	0	0.00
2.	Av era ge (- 1 4)	76 8	63. 33	0	0.00
3.	Go od (- 2 1)	2 1 5	1.6 7	0	0.00
4.	Exc elle nt (- 2 2 8	0 2 2	0	120	100. 00

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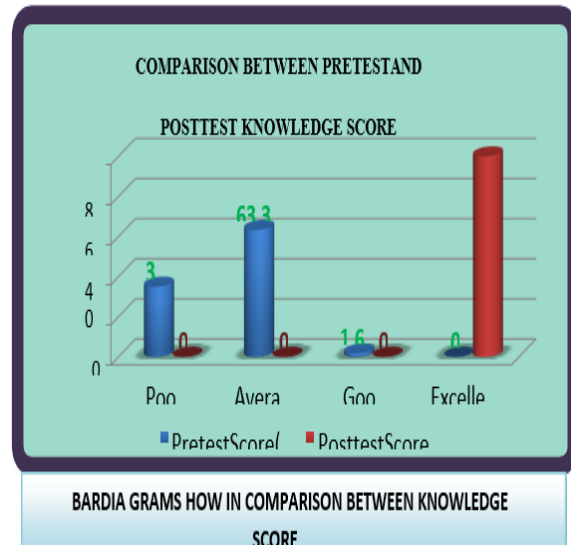
The pre-test assessment of knowledge about Peripheral Vascular Disease (PVD) among participants revealed that the majority (63.33%) had average knowledge, while 35.00% had poor knowledge, and only 1.67% demonstrated good knowledge. Notably, none of the participants scored in the excellent category.

Comparison between Mean, SD, Mean Difference and 't' Value of Pre- test and Post-test Knowledge Score

(N=120)

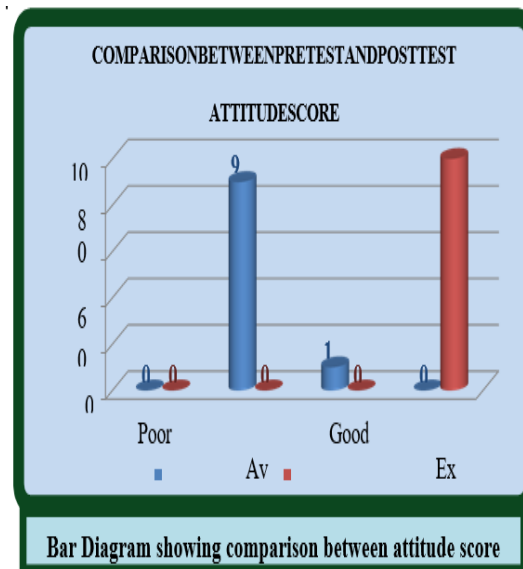
Knowledge Score	Mean (X)	S.D. (s)	Std. Error of Mean	D.F.	t-value	Significance
Pre-test	8.76	2.65	0.266	119	-68.56	P=0.000*
Post-test	26.98	1.10				

When the mean and SD of pre-test and post-test were compared and students 't' test was applied, it can be clearly seen that the 't' value was -68.56 and the p value was 0.000, which clearly shows that information booklet was very effective in increasing the knowledge of the middle age person.



Section III: Comparison between Pre-test and Post-test Attitude Score

The pre-test assessment of attitude towards Peripheral Vascular Disease (PVD) revealed that the majority of participants (90.00%) had an average attitude, while 10.00% demonstrated a good attitude towards the disease. No participants fell into the poor or excellent categories during the pre-test phase.



SECTION IV: Association Between

Pre-Test Knowledge Score And Selected Demographic Variables

Conclusion: The habits, attitudes, tastes, moral standards, economic level, etc., that

The table below depicts summary of associations of demographic Variable with knowledge as follows:-

S. no.	Demographic Variable	Chi-Square Value		Level Of Significance		Significance	
		Knowledge	Practice	Knowledge	Practice	Knowledge	Practice
1.	Age	21.063	10.357	p<0.05	p<0.05	Significant	Significant
2.	Gender	1.750	0.134	p>0.05	p>0.05	Not Significant	Not Significant
3.	Marital status	3.714	1.803	p>0.05	p>0.05	Not Significant	Not Significant
4.	Education Qualification	41.127	12.055	p<0.05	p<0.05	Significant	Significant
5.	Nature Of Work	30.491	2.431	p<0.05	p>0.05	Significant	Not Significant
6.	Occupation	19.10	0.140	p<0.05	p>0.05	Significant	Not Significant
7.	Socio economic Status	32.653	3.572	p<0.05	p>0.05	Significant	Not Significant
8.	Monthly Family Income	1.713	9.321	p>0.05	p<0.05	Significant	Significant
9.	Area of Residence	1.713	2.540	p>0.05	p>0.05	Not Significant	Not Significant
10	Previous Knowledge Of PVD	1.178	0.226	p>0.05	p>0.05	Not Significant	Not Significant

The association between various demographic variables and the pre-test knowledge score was tested using the Pearson’s Correlation (Chi-Square).The chi-square only signifies the existing or non-existing of the association, but does not shows the strength of the association.

together constitute the mode of living of an individual or group. Therapeutic Lifestyle Changes (TLC) may help to be healthy always. The lifestyle changes include diet, exercise, weight loss, and other changes. Your doctor will want you to follow TLC even if you are taking cholesterol-lowering medicine. And medicine will be more effective if you have healthy eating and

exercise habits. Here in this study after the successful completion of the statistical analysis, the study revealed that the knowledge and attitude regarding lifestyle modification in prevention of Peripheral Vascular Disease were inadequate by the middle age person's.

RECOMMENDATIONS

On the basis of the study the following recommendation are offered for further research:

- The study can be replicated on a large sample of middle age person selected from various other hospitals; there by finding can be generalized to a larger population.
- A similar study may be conducted using a pre-test, post-test, control group design.
- A similar study can be carried out by using other teaching strategies i.e. self instructional module, compute-assisted instruction and video film on lifestyle modification in prevention of peripheral vascular disease in middle age person.

BIBLIOGRAPHY

1. Ansari Javed(2011).*Comprehensive Medical Surgical Nursing(1st edition)*,New Delhi: Pee Vee publications.
2. Sharma. S.K (2011). *Nursing Research and Statistics (1st edition)* New Delhi: Elseveir publications.
3. Sharma. S.K(2012).*NursingResearchandStatistics(2nd edition)*.NewDelhi: Elseveir publications.
4. BennettPC.SilvermanSGillPS(2012). "Ethnicityandperipheralarterydisease". *An International Journal of Medicine*. Vol.

102(1) 3-16. Retrieved on December 2 2013.
<http://qjmed.oxfordjournals.org/content/102/1/3.long>

5. Bhimji Shabir(2014). "PeripheralVascularDisease". *Emedicinehealth*.RetrievedonNovember.25.2013.