

Effectiveness of Structure Teaching Programme on Knowledge Regarding Prevention of Varicose Veins Among School Teachers of Selected Schools at Udaipur

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Abstract:

Background: Varicose veins are a common occupational hazard among professionals exposed to prolonged standing. Occupational groups such as nurses, school teachers and traffic police officers etc are at highest risk so preventive education is essential to decrease complications. This study evaluates the effectiveness of a Structured teaching programme in improving knowledge regarding prevention of varicose veins among school teachers.

Methods: A pre-experimental one-group pretest–posttest design was used among 60 participants. Data were collected using a structured questionnaire and analyzed using paired t-test.

Results: Mean post-test knowledge scores 22.5 (75%) were significantly higher than pre-test scores 8 (26.7%) the ‘t’ value of 28.43 is significantly higher than the tabular value 2.00 at 0.05 level of significance, indicating effectiveness of structured teaching programme.

Conclusion: STP significantly improved knowledge regarding prevention of varicose veins among school teachers.

Keywords: Varicose veins, structured teaching programme, knowledge, school teacher
Introduction

The school teachers are the main anchor of a sound and enlightened society. They hold the responsibility of the teaching and apart from parents, teachers are the main source of knowledge and values for children. There are many problems faced by the school teachers, standing most of working day hours and it has a great impacts on the lower limbs that’s can damage the joints, make muscles ache and major condition affecting is varicose veins.¹

Varicose veins are dilated, tortuous veins affecting lower limbs, commonly associated with prolonged standing. Occupational groups such as nurses, school teachers and traffic police officers are at highest risk so preventive education is essential to decrease complications.²

Varicose Veins have become a serious threat to the lives of millions of people across the globe and is said to be ignored by people living across India. In USA, the statistics shows approximately 1 in 22 or 4.5% or 12.2 million people are suffering from this problem. In India varicose vein affect one out of 4 people over age of 50. It is estimated that 10 to 20% of the general population of India eventually develop this disorder in the course of life. It is much more common in the age groups over 50, in which the incidence may reach a figure of 50% of individuals.³ The study aimed to assess effectiveness of Structured teaching programme in improving knowledge regarding prevention of varicose veins among school teachers.

Objectives

1. To assess the pre-test knowledge score of school teachers regarding prevention of varicose vein.
2. To administer structured teaching programme on school teachers regarding prevention of varicose vein.
3. To assess the post-test knowledge score of school teachers regarding prevention of varicose vein.
4. To determine the effectiveness of structured teaching programme on knowledge of school teachers regarding prevention of varicose vein.
5. To find out the association between pre-test knowledge score of school teachers regarding prevention of varicose vein with selected demographic variables.

Assumptions

- The school teachers may have inadequate level of knowledge regarding prevention of varicose vein.
- Structured teaching programme may enhance the knowledge of school teachers regarding prevention of varicose vein.

Hypothesis

H₁: The mean post-test knowledge score of school teachers who have received structured teaching programme will be significantly higher than their mean pre-test knowledge score at 0.05 level.

H₂: There will be significant association between pre-test knowledge score with selected demographic variables.

Methodology:

Research approach- Evaluative approach was selected for the study

Study design- A quasi-experimental single-group pretest–posttest research design was used for this study.

Setting and participants

The study was conducted in Nav Jeevan public secondary school and Aadinath senior secondary public school, Udaipur Rajasthan. The teachers were selected who employed and have at least 1 years experience and willing to attend the teaching programme. The teacher who are on long-term leave or having participated in similar or related study training in the past 6 months were excluded for participation.

Sample and Sampling Technique

The study included a total of 60 school teachers were selected by using non-probability purposive sampling technique from selected schools based on their availability and willingness to participate.

Inclusion criteria were:

The study includes-

- Teachers who employed past 6 months or more in same school and have at least 1 years teaching experience
- Who willing to participation and give informed consent for study
- Who understand the study materials in English or Hindi.

Exclusion criteria included:

The study excludes-

- Teachers who are not willing to participate or participate similar or related study training in the past 6 months.
- Who have health issue or on leave at the time of study

Data Collection Tool

A structured self-administered questionnaire was used, which consisted of two parts:

Section A- Demographic Variables consist age, gender, marital status, educational qualification, years of teaching experience, lecture hours per day.

Section B- Structured knowledge questionnair consist 30 questionnair.

Validity and Reliability of Tool -

The tool used to assess the knowledge regarding varicose vein among school teachers was prepared by the investigator under the guidance of experts who where in the field of Nursing and Medicine. Content and construct validity of the tool was also checked by senior experts of in this fields.

The reliability of the structured questionnaire was checked by using test-retest method and internal consistency assessed by using split half technique and Spearman Brown Prophecy Formula. It is found to be reliable ($r = 0.80$).

Intervention: Structured Teaching Program (STP)

The structured teaching programme was prepared on the basis of the content of varicose vein. The content was organized under the following headings:

- Meaning and incidences of varicose veins
- Causes and risk factors of varicose veins
- Signs and symptoms and diagnosis of varicose veins
- Prevention, management & complication of varicose veins

Teaching methods included short lectures, small-group discussions, and quick-reference pamphlet for accessing help and to review.

Data Collection Procedure- Permission was obtained from the school administration. Informed consent from teachers were obtained. The researcher explained the purpose and ensured confidentiality. The questionnaire was distributed during school hours in a classroom setting. Teacher completed the questionnaire in 20–30 minutes. The collected data were checked for completeness.

Ethical Considerations: Approval was taken from the Institutional Ethical Committee. Participation was voluntary, with the right to withdraw at any time. Confidentiality and anonymity were maintained.

Data analysis: Data entered into a spreadsheet and analyzed using statistical software SPSS. Descriptive statistics (mean, SD, frequency, percentage). Chi-square tests used to assess associations between categorical variables. $p < 0.05$ considered significant.

RESULT

Table-1: Description of demographic variables

N=60

S.N.	Variable	n	%
1	Age (years)		
	≤ 25 yrs	24	40
	26-30 yrs	21	35
	31-35 yrs	12	20
	>35 yrs	3	5
2	Gender		
	Female	44	73.33
	Male	16	26.67
3	Educational Qualification		
	D.Ed.	9	15
	D.Ed. with Graduation	21	35
	B.Ed.	30	50

4	Years of teaching Experience		
	1-3 year	27	45
	4-6 year	18	30
	7-9 year	9	15
	>9 years	6	10
5	Lecture hours per day		
	1-3	10	16.67
	4-6	50	83.33

Table-2: Comparison of level of Pre-test & Post-test knowledge of school teachers regarding prevention of varicose vein

N=60

Level of knowledge	Number of respondents			
	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Inadequate knowledge (0-50%)	36	60%	0	0%
Moderately adequate knowledge (50-75%)	24	40%	25	41.67%
Adequate knowledge (>75%)	0	0%	35	58.33%

The result showed that in the pre-test most of the participants had no adequate knowledge, 40% participants had moderately adequate knowledge & 60% participants had inadequate knowledge of school teachers regarding prevention of varicose vein.

Table-3: Effectiveness of structured teaching programme on knowledge of school teachers regarding prevention of varicose vein

N= 60

	Mean	Mean %	SD	Enhancement	Enhancement%	df	“t” value	Inference
Pre test	8	26.6	3.01	14.5	48.4	59	28.44	S
Post test	22.5	75	2.61					

S = Significant

Table: The result showed that the mean post-test knowledge score is 22.5 (75%) is greater than the mean pre-test knowledge score 8 (26.6%). The above table also depicts that the enhancement in the knowledge of participants is 14.5 (48.4%) supporting the post-test knowledge score are higher than the pre-test knowledge score. The data further represent that the 't' value of 28.44 is significantly higher than the tabular value 2.00 at 0.05 level of significance. This indicates that there was difference in pre-test and post-test knowledge score of participants and structured teaching programme is effective in improving the knowledge of school teachers regarding prevention of varicose vein.

In the post-test, after giving structured teaching programme, the participants gain adequate knowledge that was 58.33% whereas 41.67% participants had moderately adequate knowledge & 0 % participants had inadequate knowledge of school teachers regarding prevention of varicose vein, Hence research hypotheses H_1 is accepted.

Association between Knowledge Levels and Selected Demographic Variables

The Chi-square test was carried out to determine the association between the pre-test knowledge and baseline variables such as age in years, gender, marital status, educational qualification, years of teaching experience, and lecture hours per day.

Out of which age in years ($\chi^2 = 8.70$) design was found to be significantly associated with post-test knowledge at 0.05 level and the rest of the demographic variables were not significant. Hence research hypotheses H_2 is accepted.

Discussion:

The present study has been undertaken to evaluate the effectiveness of a Structured teaching programme in improving knowledge regarding prevention of varicose veins among school teachers of selected schools at Udaipur. The result showed that in pretest 60% of participants had inadequate knowledge, 40% had moderately adequate knowledge, None had adequate knowledge before intervention. This indicates a substantial lack of awareness among school teachers regarding prevention of varicose veins. In post-test majority (58.33%) achieved adequate knowledge, remaining participants had moderately adequate knowledge and none had inadequate knowledge.

Related Studies conducted among nurses and teachers reported poor baseline knowledge regarding occupational health hazards, especially those related to prolonged standing. A research study conducted by Upendrababu V et al. (2018) found that more than half of participants had inadequate knowledge regarding varicose vein prevention before educational intervention.³ Similarly, Joshi R (2022) reported that Majority of the respondents 101(47.9%) had moderate adequate level of knowledge and one fifth respondents had adequate level of knowledge regarding prevention of varicose vein.⁴

The present study demonstrated a significant improvement in knowledge following the structured teaching programme, the mean pre-test score 8 (26.6%), mean post-test score 22.5 (75%) with t-value was 28.44 ($p < 0.05$) clearly establish the effectiveness of the structured teaching programme.

These findings are strongly supported by earlier research of Sharma SK et al. (2025) reported a statistically significant increase in knowledge scores ($t=28.39$, $p<0.05$) after intervention, after structured teaching among nurses, with a similar pretest–post test design.⁵ Shrestha P (2021) found that educational interventions increased awareness scores by more than 50%, closely matching the improvement observed in the present study.⁶ A study by Dalboh A et al. (2020) showed that high prevalence of varicose veins among teachers is necessary to spread awareness regarding varicose veins among them and sensitize them with the methods to prevent its formation.⁷

Conclusion:

Based on the findings of the study the STP is one of the effective teaching strategy to improve the knowledge among school teachers regarding varicose vein as the result had shown a significant change in the post test knowledge score. Moreover it is also clear from the study that there was significant association between the knowledge score and the selected demographic variables.

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