

*Original research article*

## A Study To Assess The Effectiveness Of Video Assisted Teaching On Knowledge Regarding Prevention Of Varicose Vein Among Staff Nurses In Selected Hospital, Bangalore.

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**Abstract:** Varicose veins are twisted, enlarged veins, mostly dark blue in colour, seen near to or raised above the surface of the skin mainly seen in the lower extremities. Professions involving standing or sitting for prolonged periods of time have an increased risk of developing varicose veins. The study was conducted to assess the effectiveness of Video Assisted Teaching on prevention of varicose vein among the staff nurses in selected hospital, Bangalore. A Pre experimental one group Pre-test Post-test study design and Convenient sampling technique was adopted. The sample consisted of 60 staff nurses. The tool developed and used for data collection was structured knowledge questionnaire. In pre-test, among 60 staff nurses 52 (86.7%) had inadequate knowledge, 8 (13.3%) had moderate knowledge and no staff nurses had adequate knowledge regarding on prevention of varicose vein. In Post-test 49 (81.7%) of staff nurses exhibited adequate knowledge and 11 (18.3%) exhibited moderate knowledge and no staff nurses had inadequate knowledge regarding prevention of varicose vein. The mean Post-test knowledge score [36.07± 5] was greater than mean Pre-test knowledge score [17.89 ± 6.36]. As the obtained value of 't' is more than table value at p< 0.05 level, the value is found statistically significant. Hence the study concluded that Video Assisted Teaching on prevention of varicose vein is highly effective and the knowledge regarding prevention of varicose vein was associated with the exposure to educational program related to varicose vein with  $\chi^2 = 3.85$  which is significant at p< 0.05 level. Also years of experience had some association with  $\chi^2 = 7.85$  (significant at p< 0.05 level) with the knowledge scores.

Keywords: Varicose Veins, extremities, Video Assisted Teaching

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### Introduction

Health care is a dynamic industry which has brought about tremendous changes in the role of nurses. Nurse's job involves prolonged standing which predisposes them to various venous diseases including varicosity of vein. The prevalence of varicose veins varies widely among nurses and is commonly reported in association with certain risk factors and lifestyles. Female gender and excess body weight are two risk factors commonly identified by research<sup>1</sup>

Varicose veins are twisted, enlarged veins, often dark blue in colour, near to or raised above the surface of the skin mainly seen in the lower limbs. Professions involving standing or sitting for prolonged periods of time have an increased risk of developing varicose veins i.e. store clerks, waitresses, hair dressers, flight attendants, teachers, nurses.<sup>2</sup>

Most varicose veins arise de novo (i.e., primary), but some are secondary to obstruction or valve damage. While many risk factors for varicose veins

have been postulated including age, pregnancy, ethnicity, family history, obesity, occupations requiring prolonged standing or sitting, lack of dietary fiber, use of constricting corsets and sitting posture for defecation.<sup>3</sup>

Varicose veins if treated by primary prevention has better prognosis than going for pharmacotherapy and surgical management<sup>5</sup>.

Recurrent varicose veins are a significant problem, with recurrence reported as occurring in 20-80% of cases treated for primary varicose veins. The rate of occurrence increases with time. It is assumed a recurrence rate increases to around 50% within 5 years following treatment<sup>6</sup>

The nursing professionals are forced to stand for a long time for giving care especially when they are posted in operation theatre. When the surgery is of long duration they must stand till end of surgery and afterwards also for giving aftercare to the patient<sup>4</sup>. Lack of rest and exercise for the calf muscles may lead to decrease in tone of those “second heart of the body”. This which in turn leads to the leaflet valves incompetence which then causing the varicose vein in staff nurses. A lot more factors cause nurses especially female staff nurses, prone to varicose vein<sup>7</sup>. Hence the investigator feels the need for bringing about awareness among nurses regarding several methods of prevention of varicose veins.

### Objectives of the study

1. To assess the pretest level of knowledge on prevention of varicose vein among staff nurses.
2. To find the effectiveness of video assisted teaching on knowledge regarding prevention of varicose among staff nurses.
3. To explore the association between posttest level of knowledge of staff nurses on prevention of varicose vein with their selected demographic variables.

### Hypotheses

**H<sub>1</sub>**: There is significant difference between the means of pretest and posttest knowledge scores of staff nurses exposed to video assisted teaching on

prevention of varicose vein at 0.05 level of significance.

**H<sub>2</sub>**: There is significant association between selected demographic variables and level of knowledge of staff nurses on prevention of varicose vein.

### Material and methods used

**Research design**: Pre- experimental one group post test design was used for the study.

**Research approach**: Quantitative approach was adopted for the present study.

**Setting of the study**: The study was conducted in KCG hospital, Bangalore.

**Population**: Population for the present study was staff nurses

**Sampling and sample size**: convenient sampling technique was used to select 60 staff nurses who fulfilled the sampling criteria for the present study.

### Variables

**Dependent variables**: Level of knowledge on prevention of varicose vein among staff nurses

**Independent variables**: Video assisted teaching on prevention of varicose vein

**Demographic variables**: Age, gender, income, marital status, years of experience, area of experience, exposure to educational program related to varicose vein, source of information.

### Sampling criteria

#### Inclusion criteria

Staff nurses who :

- gave consent for the study.
- worked under the selected hospital for the study.

#### Exclusion Criteria

Staff nurses who

- were not available at the time of data collection
- were not willing to give consent

### Development and description of tools used in the study

**Section A**: Demographic data consist of 11 items include age, gender, educational status, monthly income, marital status, religion, years of experience, area of experience, exposure to educational program related to varicose vein and

source of information on prevention of varicose vein.

**Section B:** A structured Knowledge Questionnaire was prepared consisting of 42 items on knowledge about prevention of varicose vein. The items were given, one score for correct answer and zero score for wrong answer. The items were developed to cover different areas such as meaning and definition (9 items), etiology and risk factors (10 items), signs and symptoms (10 items) and prevention (13 items).

### Data collection procedure.

The written permission letter was obtained from KGM hospital. The purpose of the study was explained to the staff nurses and informed consent was obtained from the respondents. A pretest with structured knowledge questionnaire was administered, followed by administration of Video Assisted Teaching. After conducting pretest and intervention, posttest was conducted after 7 days in the hospital. The data collection process was terminated by thanking the respondents for their patience and co-operation.

### Plan for data analysis

The data analysis was planned to include descriptive and inferential statistics.

#### Descriptive statistics

- To describe the demographic data and level of knowledge of the staff nurses by frequency and percentage distribution.
- To compute mean and standard deviation for the pre and post-test knowledge among staff nurses.

#### Inferential statistics

- Paired 't' test to assess the effectiveness VAT on assessment of knowledge of staff nurses.
- Chi-square test to study the association between posttest knowledge and demographic variables of staff nurses

### Data analysis and major findings

#### Section 1: Description of demographic data of staff nurses.

- ❖ Majority of the staff nurses who participated in the study were between the age of 32-37 years 31 (51.7%)
- ❖ All the staff nurses were females (100%)

- ❖ Regarding educational status 29 (48.3%) of the staff nurses were GNM, PB Bsc (N) were 20(33.4%), only 11(18.3%) were graduate nurses.
- ❖ Regarding the monthly income of staff nurses 25(41.7%) had Rs.5001-1000, 30 (50%) had Rs.10001-15000 and 5(8.3%) had >Rs.15001
- ❖ Majority of the staff nurses 35 (58.3%) were Hindus, 20(33.3%) were Christians and 5(8.4%) of them belonged to Islam religion.
- ❖ 45(75%) staff nurses were married and 15(25%) were unmarried.
- ❖ With reference to years of experience majority 30 (50%) had 11-15 years of experience and 21(35%) had 5-10 years of experience, 4(6.7) had >16 years of experience and 5 (8.3%) had less than 5 years of experience.
- ❖ With reference to area of experience, majority of staff nurses who have from medical general ward and surgical general ward i.e 20(33.3%) respectively from each. Intensive care unit and emergency unit shares equal no of nurses i.e 10(16.7) to this study.
- ❖ Exposure to educational program related to varicose vein participated in the study 20 (33.3%) were exposed. Regarding the source of information electronic media, 10(50%). Friends /colleagues and the professional programs were 5(8.4%) each respectively.

#### Section 2: Description of knowledge scores

In pre-test, among 60 staff nurses 52 (86.7%) had inadequate knowledge, 8 (13.3%) had moderate knowledge and no staff nurses had adequate knowledge regarding prevention of varicose vein.

In Post-test 49 (81.7%) of staff nurses exhibited adequate knowledge and 11 (18.3%) exhibited moderate knowledge and no staff nurses had inadequate knowledge regarding prevention of varicose vein.

**Table1. Enhancement of overall knowledge score of the staff nurses compared with the means of pretest and posttest knowledge scores.**

**N=60**

Overall pretest and posttest knowledge					
Aspects	Max. Score	Mean	Mean (%)	SD	Paired 't' Test
Pre test	42	17.89	42.6%	6.36	*31.45
Post test	42	36.07	85.9%	5	
Enhancement	42	18.18	43.3%	±1.36	

\* Significant at 5% level,  $t(0.05, 59df) = 1.671$

The mean Post-test knowledge score [36.07] was greater than mean Pre-test knowledge score [17.89]. From the data available, it was evident that, after the administration of Video Assisted

**Recommendations**

1. A similar study can be replicated by taking larger sample of staff nurses.
2. A similar study can be conducted with control group.
3. An extensive teaching program may be conducted including all aspects of varicose vein and its prevention for better understanding among other general population who are vulnerable for varicose vein.

**Conclusion**

The present study attempted to assess the pre-test knowledge scores of the staff nurses regarding prevention of varicose vein. Majority 52(86.7%) had inadequate knowledge, and only 8 (13.3%) had moderately adequate knowledge and none of them have adequate knowledge on prevention of

Teaching, there was an increase in knowledge score among the nurses with regard to the prevention of varicose vein. As the obtained value of 't' is more than table value at  $p < 0.05$  level, the value is found statistically significant, hence the Video Assisted Teaching on prevention of varicose vein was highly effective

**Section 3: Association of posttest level of knowledge of staff nurses with their selected demographic variables.**

The chi square values were computed for variables like age, gender, religion, marital status, area of experience, source of information. The obtained value was less than the table value. So there was no association between these variables with the knowledge scores of staff nurses on prevention of varicose vein. When the chi square value was computed for exposure to educational program related to varicose vein and years of experience the obtained value was higher than the table value at  $p < 0.05$  level. Hence there was statistically significant association with these selected demographic variables of staff nurses knowledge level on prevention of varicose vein. This shows that hypothesis (H2) accepted with regard to these variables.

varicose vein in the pre-test. The comparison of pre and post test knowledge score on prevention of varicose vein through video assisted teaching among staff nurses reveals that the overall mean improvement was 18.18 with standard deviation of  $\pm 1.36$  the paired t test value was 31.45 which highly significant at  $p < 0.05$  thus the VAT was effective.

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