

## Research Article

# A COMPARATIVE STUDY TO ASSESS THE KNOWLEDGE REGARDING PREVENTION AND MANAGEMENT OF VARICOSE VEINS AMONG NURSING PERSONNEL BETWEEN AUTONOMOUS AND PRIVATE HOSPITALS, HYDERABAD

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### ABSTRACT

**Introduction:** Varicose vein is one of the most important venous disorder affecting lower limbs. In this condition veins become abnormally thick, full of twists & turns. The majority of the cases are reported in developed and industrialized countries. Hereditary is one of the major role in development of Varicose veins. 50% of the patients have a family history of the disease. However, Worldwide the prevalence rate varies between 10-30% of the population. Moreover, one of the important aspect to be considered that the Varicose vein problems are increasing day by day, which are preventable, if not taken care on time, which may be very painful & debilitating condition which may have a hazardous effect on health of the individual. **Objectives** To assess the knowledge regarding prevention and management of varicose vein among nursing personnel who are working in autonomous and private hospital. To compare the knowledge regarding prevention and Management of varicose veins among nursing personnel who are working in autonomous and private hospital. To find association between knowledge scores and selected demographic Variables like age, sex, educational qualification, & years of experience. **Research approach:** The study is Descriptive comparative study Sample: The total the sample size was 60, out of that 30 nursing personnel from autonomous hospital and 30 nursing personnel from private hospital, Hyderabad. Sampling technique was Non – probability convenient sampling technique **Method of data collection:** Self administered structured questionnaire is used to collect the data from nursing personnel on prevention and management of varicose veins. **Results:** The study findings reveals that Nursing personnel from Autonomous hospital had average of knowledge of 20 (67%). Where as in Private hospital had average knowledge of 13 (43%). However, Nursing personnel from Autonomous hospital has more knowledge when compare to Private Hospital Nursing Personnel regarding prevention & Management of Varicose vein In conclusion, there was a significant relationship found between the knowledge scores and selected demographic variables like educational status of Nursing Personnel between Autonomous and Private hospitals.

**Keywords:** Varicose Vein, Autonomous, Private Hospital, Nursing Personnel, Prevention, Management.

### INTRODUCTION

The vascular system is vast network of vessels through which blood circulates in the body. Arteries, arterioles, veins, venules, capillaries and lymphatic constitute the structural elements of vascular system. Approximately 75% of total blood volume is contained in the veins. Varicose vein is one of the most important venous disorder affecting lower limbs. The condition is most common in women and in people whose occupations require prolonged standing such as sales men, hair stylists, nurses, teachers, auxiliary health personnel and construction workers<sup>2</sup>. Recent studies have suggested that prolonged standing at work is associated with development of disease of varicose veins. Annual incidence of varicose veins was 3% in women & 2% in men, although many also point out that there is a difference in prevalence between various areas of the world & between various ethnicities. Varicose veins are more common in women (about 2-3 times as prevalent in women than in men) of the people who have varicose veins between 10 -20% actually are symptomatic enough to complain about their lower leg varicose veins & seek treatment<sup>3</sup>.

### Objectives

1. To assess the knowledge regarding prevention and management of varicose veins among nursing personnel who are working in autonomous and private hospital.

2. To compare the knowledge regarding prevention and Management of varicose Veins among nursing personnel who are working in autonomous and private hospital.
3. To find association between knowledge scores and selected demographic Variables like age, sex, educational qualification, & years of experience.

### REVIEW OF LITERATURE:

A study was conducted on the incidence of varicose veins in the city of Tampere, Finland<sup>1</sup>. The study aimed at estimating the incidence of varicose veins in complete cohorts of 40-60 years old in a general population. A validated questionnaire (with 93% sensitivity and 92% specificity) was used in a general population of 6874 individuals (aged 40, 50 and 60). Initially, 3065 of them had no varicose veins & 78% were followed up for 5 years. The results showed that overall incidence was 13.5 per 1000 person year (8.5 for men & 19.2 for women). The researcher concluded that varicose veins appear in the middle aged population and rate is linked with the female gender.<sup>4</sup> An epidemiological study was conducted on prevalence of varicose veins in women cotton workers in England (504 workers) and Egypt (467workers)<sup>5</sup>, data was collected by using standardized questionnaire based on age, parity, body weight and occupation. After standardizing for the other variables there was a statistically significant excess of varicose veins in women wearing corsets and roll-ons compared with those wearing less-constrictive garments. The study concluded that a significant excess varicose veins was found in women who stood at their work compared with those whose jobs

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entailed walking or sitting.<sup>5</sup> A cross sectional study on the prevalence of varicose veins and chronic venous insufficiency in men and women in general population at Edinburg city”, where men and women aged 18-64 years selected randomly for the study ,used cross sectional survey design. The results showed that in 1566 subjects examined , the age adjusted prevalence of trunk varices was 40% in men and 32% in women(p<or=0.01).The researcher concluded that approximately one third of men and women aged 18-64 years had trunk varices.<sup>6</sup> However, a cross sectional population study on the symptoms of varicose veins at Edinburg”, where an age stratified random sample of 1566 people (699 men and 867 women) aged 18-64 selected from the computerized age –sex registers. Data was collected by using self administered questionnaire on presence of symptoms. The results of the study showed that the prevalence of symptoms related to increase with both sexes and it was concluded that even in the presence of trunk varices, lower limb symptoms probably have a non-venous cause.<sup>7</sup> Moreover, a prospective study was conducted “To identify the relation between prolonged standing at work and hospitalization due to varicose veins in Denmark.” A representative random sample of 9653 working age adults who were 20-59 years old and employed were taken and structured questionnaire on varicose veins and demographic variables were used. The results revealed that the employees with jobs that require prolonged standing, the relative risk was 1.75 (95% CI 0.92 to 3.34) for men and 1.82 (95% CI 1.12 to 2.95) for women. The etiological fraction of prolonged standing or walking at work was estimated as 22.5% for men and 22.6% for women. The study concluded that prolonged standing at work constitutes and excess risk of hospital treatment due to varicose veins.<sup>8</sup> In addition, a cross sectional study was conducted to assess the prevalence of varicose veins among 100 staff nurses in Thiruvananthapuram.” Where they used interview method with a semi-structured pre-tested pre reviewed questionnaire and clinical examination. The results showed that the prevalence of varicose veins among staff nurses was 19%(95% CI-11.2-26.8). Among those affected 89.5% had a history of standing for long duration and concluded that standing for a longer hours was a major risk factors for prevalence of varicose veins and recommended health education and cutting down of working hours.<sup>9</sup>

**METHODOLOGY:**

**Research approach**

In view of problem selection and objectives descriptive research approach is considered as an appropriate research approach for the study.

**Research design**

Descriptive comparative study design is considered as an appropriate research design for the study.

**Source of data**

Nursing personnel working in selected hospitals, Hyderabad.

**Population**

The population selected for the present study isnursing personnel working in autonomous & private hospitals, Hyderabad.

**Sample**

The samples are 30nursing personnel working in autonomous hospital and 30 nursing personnel working in private hospital, Hyderabad.

**Sampling technique**

Non – probability convenient sampling technique is planned to conduct the present study.

**Method of data collection**

Self administered structured questionnaire is used to collect the data from nursing personnel on prevention and management of varicose veins.

**The findings of the study were organized and presented as follows:**

**Section I:**

Frequency and percentage distribution of nursing personnel between Autonomous and Private hospitals according to their demographic data.

**Section II:**

Frequency and percentage distribution on levels of knowledge scores of nursing personnel regarding prevention and management of Varicose veins between Autonomous and Private hospitals.

**Section III:**

Association between knowledge scores of nursing personnel between autonomous and private hospitals with their selected demographic variables such as age, educational status and years of clinical experience.

**Table – 1: Frequency and Percentage distribution of demographic Data of nursing personnel working in Autonomous and Private hospitals.**

**N1=30, N2=30**

S.No	Demographic Variables	Autonomous Hospitals		Private hospitals	
		Frequency	Percentage	Frequency	Percentage
1.	<b>Age in Years</b>				
a.	21 – 30 years	14	46.66%	26	86.66%
b.	31 – 40 years	9	30%	4	13.34%
c.	41 – 50years	7	23.34%	0	0.00%
d.	50 years and above	0	0%	0	0.00%
2.	<b>Sex</b>				
a.	Female	24	80%	25	83.33%
b.	Male	06	20%	05	16.66%

S.No	Demographic Variables	Autonomous Hospitals		Private hospitals	
3.	<b>Educational status</b>				
a.	ANM	09	30%	0	0
b.	General Nursing Midwifery	09	30%	17	56.66%
c.	Post B.sc Nursing	03	10%	0	0
d.	B.Sc Nursing	09	30%	13	43.34%
e..	M.sc Nursing	0	0	0	0
4.	<b>Area of clinical exposure</b>				
a.	General wards	11	36.66%	07	23.33%
b.	Critical care units	11	36.66%	20	66.66%
c.	Operation theatres	07	23.33%	3	10%
d.	Recovery rooms	01	3.33%	0	0.00%
5.	<b>Years of clinical exposure</b>				
a.	< 2years	6	20%	15	50%
b.	2-4years	11	36.66%	11	36.66%
c.	4-8 years	11	36.66%	04	13.33%
d.	>8years	2	6.66%	00	0
6.	<b>Any previous knowledge</b>				
a.	Yes	28	93.33%	29	96.66%
b.	No	02	6.66%	01	3.33%
7.	<b>If yes source of information</b>				
	<b>News papers</b>				
a.	Television	5	16.66%	2	6.66%
b.	Training	0	0%	0	0
c.	Internet	16	53.33%	23	76.66%
d.	If any others	5	16.66%	3	10%
e.		2	6.66%	1	3.33%

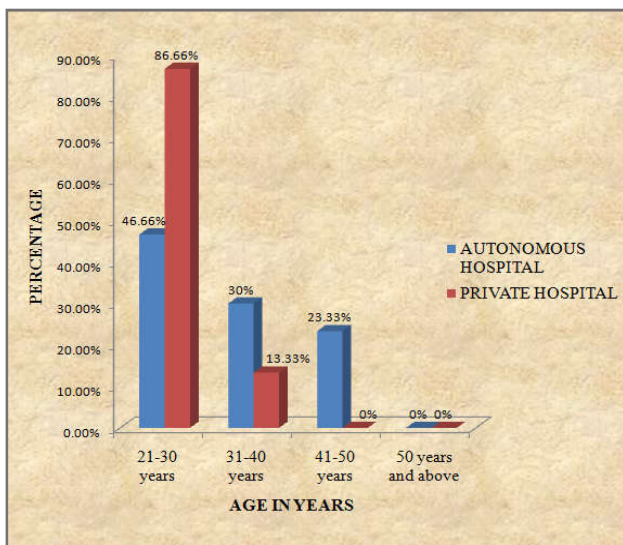


Fig 3: Percentage distribution of Nursing Personnel between Autonomous and Private Hospital according to age

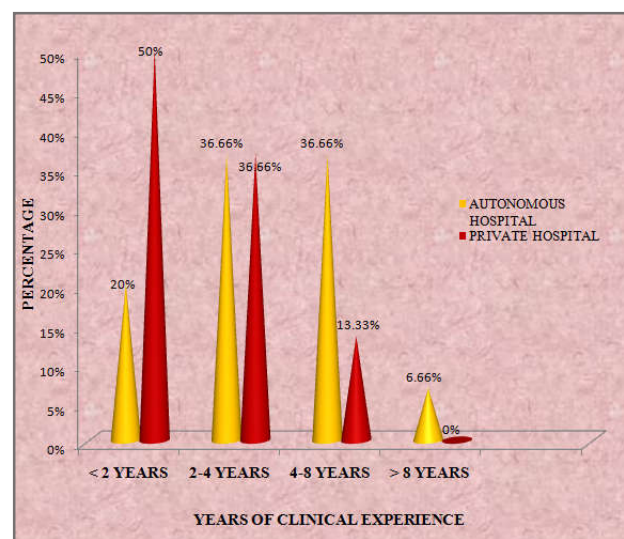


Fig 5: Percentage distribution of Nursing Personnel between Autonomous and Private Hospitals according to years of Clinical Experience.

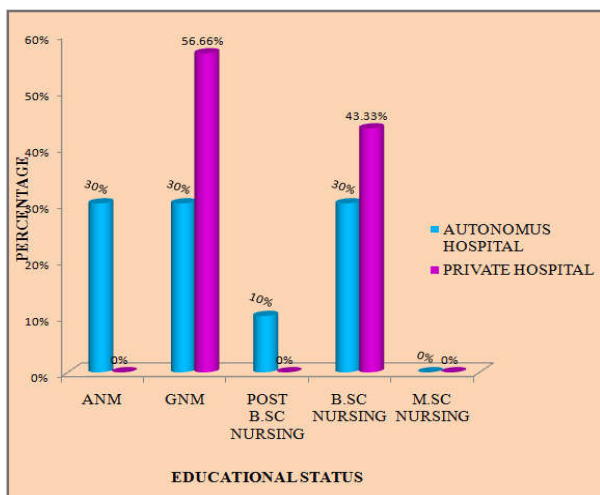


Fig 4: Percentage distribution of Nursing personnel between Autonomous and Private Hospital according to Educational status

**SECTION II**

Table 2: Frequency and percentage distribution of level of Knowledge of Nursing Personnel on Prevention and Management of varicose veins between Autonomous and Private Hospitals. N1= 30,N2=30

CATOGERY	Autonomous hospital		Private hospital	
	Frequency	Percentage	Frequency	Percentage
<b>Below average (&lt;50%)</b>	10	33.33%	17	56.66%
<b>Average (51-74%)</b>	20	66.66%	13	43.33%
<b>Above average(&gt;75)</b>	0	0	0	0%
<b>Total</b>	30	100%	30	100%

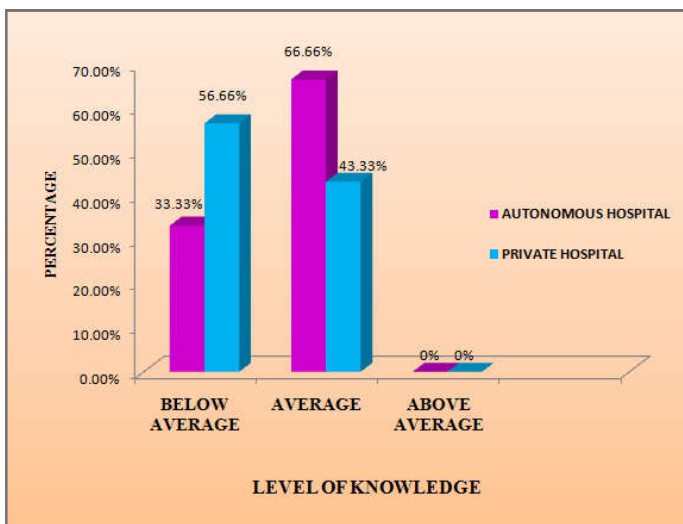


Fig 6: Percentage distribution of level of Knowledge of Nursing Personnel between Autonomous and Private Hospitals

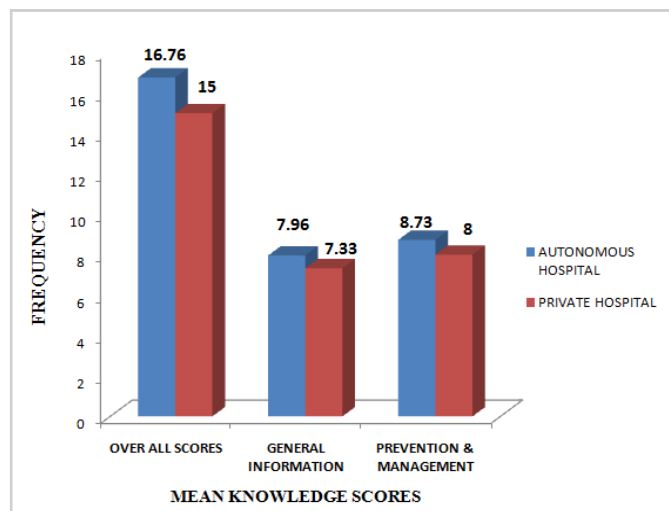


Fig 7: Comparison of mean Knowledge Scores of Nursing Personnel between Autonomous and Private Hospitals.

Table 3 :Comparison of mean Knowledge scores of Nursing Personnel regarding at each area of Management between Autonomous and Private Hospitals. N1=30, N2=30

S.No	Areas of Knowledge	Autonomous Hospital			Private Hospital		
		Percentage	Mean	SD	Percentage	Mean	SD
1.	Regarding general information of Varicose veins	56.9%	7.96	1.46	52.38%	7.33	2.42
2.	Regarding prevention and management of Varicose veins	54.58%	8.73	1.79	50%	8	2.03
<b>Overall scores</b>		55.74%	16.76	3.56	51.19%	15	3.43

SECTION – II

Table- 4: Comparison of mean Knowledge scores of Nursing Personnel of Autonomous and Private Hospitals N1=30, N2=30

CATEGORY	Mean	SD	t-test
Autonomous hospital	16.76	3.56	t <sub>cal</sub> = 1.95 t <sub>tab</sub> = 1.671
Private hospital	15	3.43	df = 58 S

P < 0.001 df= degrees of freedom, t<sub>cal</sub>= t calculated value, t<sub>tab</sub>= t tabulated value

Table-4 shows that ,among Autonomous hospital staff nurses mean was 16.76 and SD was 3.56 and staff nurses of private hospital mean was 15 and SD was 3.43.Unpaired 't' test calculated 't' value was 1.95 and table value was 1.671 at 58 df at P<0.001 level of significance. Calculated 't' value was greater than table value. Hence there was a significant difference between the knowledge regarding prevention and management of varicose veins among nursing personnel between Autonomous and Private hospitals.

SECTION – III

Table -5: Association between knowledge of nursing personnel in Autonomous hospital regarding prevention and management of varicose veins with age. N=30

Age of the nursing personnel	Level of knowledge						Total frequency	Chi square value
	Below average		Average		Above Average			
	Freq.	Percent	Freq.	Percent.	Freq.	Percent		
• 21-30 years	3	10	11	36.66	0	0	14	1.81
• 31-40 years	4	13.33	5	16.66	0	0	9	Df 2
• 41-50 years	3	10	4	13.33	0	0	7	NS
• 51 years and above	0	0	0	0	0	0	0	
<b>TOTAL</b>							30	

Note: NS - Not significant

Table- 5 shows that relationship between knowledge scores of autonomous hospital nursing personnel regarding prevention and management of Varicose veins with age. The table value of chi square at 0.05 level of significance with df 2 is 5.99, as the calculated value of chi square (1.81) was less than the table value that shows there was no significant association between the age and knowledge on prevention and management of Varicose veins.

**Table - 6: Association between knowledge of nursing personnel in Autonomous hospital regarding prevention and management of varicose veins with educational status N=30**

Educational status of the nursing personnel	Level of knowledge						Total frequency	Chi square value
	Below average		Average		Above average			
	Fre.	Perct.	Fre.	Percent.	Fre.	Percent.		
ANM	6	20	3	10	0	0	9	11.56 Df 3 NS
GNM	2	6.66	7	23.33	0	0	9	
Post basic BSC	2	6.66	1	3.33	0	0	3	
BSC Nursing	1	3.33	8	26.66	0	0	9	
TOTAL	11	36.65	19	63.32	0	0	30	

Note: NS - Not significant

**Table – 6** shows that relationship between knowledge scores of autonomous hospital nursing personnel regarding prevention and management of Varicose veins with educational status. The table value of chi square at 0.05 level of significance with df 3 is 7.82, as the calculated value of chi square (11.56) was greater than the table value that shows there was a significant association between the educational status and knowledge on prevention and management of Varicose veins.

**Summary:**

Varicose veins are one of the important venous disorder affecting lower limbs. The condition is most common in women and in people whose occupations require prolonged standing such as sales men, hair stylists, nurses, teachers, auxillary health personnel and construction workers. The nursing personnel are forced to stand for a long time for giving care especially when they are posted in their working hours. Most of the time they must stand in order to provide care to the patients.

**CONCLUSION:**

The following conclusions were drawn from the present study. The study findings revealed that nursing personnel from Autonomous hospital 10(33.33%) had below average knowledge,20(66.66%) had average knowledge. Where as in Private hospital 17(56.66%) had below average knowledge,13(43.33%) had average knowledge and none of were having above average knowledge. The study results shown that there was a significant relationship found between the knowledge scores and selected demographic variables like educational status of nursing personnel between Autonomous and Private hospitals.

**Nursing Implications:**

The findings of the study have several implications for Nursing Education, Nursing Practice, Nursing Administration and Nursing Research.

**Nursing Education:**

Nursing Education aims in preparing nurses who will be able to plan and provide comprehensive care to the individuals, family and society after completion of educational programme. The Nursing Educator can help the nursing students to gain in-depth knowledge and skills in

providing the information on varicose veins. Adequate opportunities to be provided for the student nurses to work in various in service educational programmes. The major challenge for the nursing education in the next decade will be to produce a steady supply of well prepared graduates to face the increasing needs of patients and rapidly changing technology. Nurse educators can motivate nursing students as well as the staff nurses to participate in seminars, attending conferences and workshops related to varicose veins to gain additional knowledge which will help them to know in detail regarding the various aspects in management of varicose veins.

**Nursing Practice:**

The nurse must posses' highly specialized skills and necessary knowledge essential for professional nursing practice. A nurse can be a good care giver only when she possesses specialized skills and ability to rationalize thing while performing nursing care activities. It is one of the major responsibilities of the nurse to bring her knowledge into practice, remembering all the instruction which can benefit the patients through her service. A nurse has to meet all the demands and priorities the needs of the patients, giving each area equal importance. Nurse has to follow the instructions while providing care to the clients with varicose veins as well as her by following preventive measures. Instruct the student to provide adequate information to family members about prevention and management of Varicose veins. Participate in in-service education program on prevention and management of Varicose veins.

**Nursing Research:**

Nursing research is important in nursing to expand the body of knowledge, to maintain specific accountability to public, to document nursing contribution to health care delivery and to provide the base for sound evidenced based practice. There is severe in-depth inadequacy in Nursing Research studies regarding the knowledge regarding prevention and management of varicose veins among

nursing personnel between Autonomous and Private hospitals. Hence, a similar study can be conducted with the large sample covering the entire staff nurses in a hospital, a similar study can be conducted among high risk population for varicose veins such as teachers, traffic police etc.

#### **Nursing Administration:**

Professional nurses assume leadership and management responsibilities regardless of the activity which they are involved. Nurse administrator has to formulate policies, protocols, guide lines, and systems of care in collaboration with the multidisciplinary team. Similarly she ensures professional practice and research based practice, which is clinically effective among the staff nurse working under her. A nurse administrator must organize special sessions on prevention and management of Varicose veins for the staff nurses who are incompetent in their practice. A nurse administrator can organize the staff development programmes for nurse to update their knowledge regarding management of varicose veins and to carry out continuing nursing education programme for health care providers to develop efficient nurse practitioners. Effectiveness of nursing care can be obtained through the formulation of certain standards and checking for its applicability. The future image of nurses depends on how quickly and effectively nurses lose the lethargy that is a major restraining force in their professional growth and development.

#### **Limitations**

- The sample size for the study was small; therefore generalization of findings is limited to the population under study.
- Threat to internal validity like age, gender, education and exposure of information to Varicose veins may have affected the findings of the study.
- Knowledge is subjective and is measured by structured questionnaire; therefore it may have affected the findings of the study.
- This study was limited to nursing personnel between Autonomous and Private hospitals; therefore generalization limited to the nursing personnel.

#### **Recommendations:**

A similar study can be conducted on large and wider sample for a longer period of time among traffic police. teachers. and staff nurses. A comparative study can be conducted between staff nurses working in critical care units and general wards on prevention and management of varicose veins A study can be conducted to evaluate the effectiveness of structured teaching program on prevention and management of varicose veins. Also, a similar study can be conducted between Government and private hospitals.

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