



Assess The Knowledge Of Risk Factors And Preventive Measures Of Varicose Vein Among Icu Staff Nurses At Selected Icu Hospitals At Agra, Uttarpradesh

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Abstract:

Background of study: Varicose vein has disturbed humans since ancient days as a chronic disorder. According to the current statistics given by the Express health care, approximately 2.7 million people worldwide suffer with varicose veins. If left untreated and undiagnosed, varicose veins can end up with pooling of blood in the venous system and further complication

Objective: To assess the knowledge of staff nurses regarding risk factors and preventive measures of varicose vein.

Methods: A quantitative research approach with a non-experimental descriptive survey research design was used to select 60 staff nurses working in the ICUs using convenience sampling method. The questionnaire were checked for completeness, cleaned manually and entered in to Epi- Data version 4.2. Then the data was transferred in to SPSS version 21.0 for further analysis. Descriptive statistics were carried out. Finally checked association between dependent and independent variables.

Result: showed that 16 (26.6%) staff nurses had good knowledge regarding prevention of varicose vein, 34 (56.6%) had Average knowledge regarding prevention of varicose vein, and 10 (16.7%) had poor knowledge regarding prevention of varicose vein. There is significant association between education status with p value <0.05 level of significant.

Conclusion: Approximately only half of the study participants had adequate knowledge regarding risk factors and preventive measures of varicose vein. Hence it is recommended that extensive educational sessions to be conducted for further enhancement of awareness of staff nurses related to prevention and management of varicose veins.

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Keywords: Assess, Risk factors, varicose vein, staff nurses

Introduction:

Over time of merely thirty seconds the blood travels the length and breaths of the person's body reaching on each single cell out of the trillions of cells in body. Blood acts as a carrier and transporter for oxygen and nutrients to cell and reciprocally it carries off the waste products like carbon dioxide, heat and excess water. It gets next to impossible for the blood to flow through cells without a correct system. Therefore, to facilitate the blood flowing the heart act as a pump and vessels like veins, arteries and capillaries provide a system for blood to move from one place to another. This method of movement of blood with within the body by utilizing veins, arteries, capillaries and heart is known as circulation and the system used for circulation is known as the vascular system[1].

Lower-limb varicose veins (VVs) are relatively common, with reported prevalence ranging between 10% and 30% worldwide. While the etiology of VVs is not clearly known at present, exacerbating factors have been identified. General risk factors are increasing age, belonging to the female sex, family history of venous diseases, pregnancy, smoking and overweight. Prolonged working in a standing position increases the prevalence of VVs and is an important occupational risk factor [2].

Varicose vein typically happens within the saphenous veins and perforator veins within the ankle joint. Inheritance or family disposition that results in loss of vessel wall snap could be a primary cause. Standing for extended periods, obesity, and gestation are potential contributing factors. Trauma, DVT, and inflammations that ends up in vein valve harm are secondary causes. This disorder typically happens within the veins of the legs, though it may occur in different parts of the body. The people whose job demands standing most of the time on their feet each working day (e.g., nursing staffs, teachers, sales assistants, traffic police etc.) are at bigger risk of health issues as well as unhealthy veins, poor circulation and swelling within the feet and legs, foot issues, joint harm, heart and circulatory issues and gestation difficulties[3].

A study was conducted Varicose veins is increasing worldwide, since the nurses especially the critical care nurses spend most of the time standing, they are prone to get lower limb symptoms like itchiness, cramps, burning sensation, and pain especially when standing which result in superficial swollen veins and later develop to varicose veins. Objective: The main objective of the study is to assess the risk of varicose vein among critical care nurses and nurses working in other general units of selected hospital. A non-experimental descriptive research design was adopted for the study. In this study 100 staff nurses working in Guwahati Neurological Research Centre (GNRC) hospital, Guwahati, Assam were selected. A total of fifty (50) critical care nurses and fifty (50) nurses working in other units were selected by using convenience sampling technique. The tool used for the study was demographic proforma and varicose vein assessment tools. Result showed that the findings showed that majority of staff nurses (53%) were from age group of 20-25 years, about 99% staff nurses were female, 80% staff nurses were unmarried, 64% staff nurses have 1-5 years of experience, 74% staff nurses have day duty >2 weeks, 64% staff nurses have night duty one week/month, 97% staff nurses had no history of hospitalization due to varicose vein, 48% staff nurses got the information regarding varicose vein from the health care personnel, and 89% staff nurses did not use crape bandage or stocking during duty hours. The mean of critical care nurses score (9.78) was higher than the mean of nurses working in general units score (5.18). Study concluded that On the basis of the findings, the researcher concluded that the risk of varicose vein is high in nurses working in critical care units and is associated with age, total year of experience, total day duty, total night duty, and sources of information. [4] Current statistics reveal that nearly 2.7 million people worldwide suffer from varicosities and that is ever increasing day by day. As far as India is concerned, experts are witnessing a growth in prevalence rate of varicosities especially among women. Nearly, 15-20 % of women and 10-15 % of men suffer from varicose veins in India [5]. Even though many studies have assessed the knowledge of health workers and other population regarding general aspects of varicose vein and its management, this study specifically focuses on the knowledge regarding the risk factors and preventive measures of varicose vein among the intensive care unit staff nurses as it is always said that it's better to prevent the condition from occurring than to treat it later[6].

Methodology

Study area and period

Study was conducted at selected ICU hospitals at Agra, Uttarpradesh and study period one month.

Study design

A cross sectional study was conducted to attain the objectives of the study.

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Population

Source and study population: All staff nurses working in Intensive care Unit hospitals

Inclusion criteria and Exclusion criteria**Inclusion criteria:**

- All staff nurses working at selected Intensive care unit hospitals.
- Intensive care unit staffs working in the study area at least for six months

Exclusion criteria:

- Intensive care unit staffs who are absent during data collection period

Sample size: Convenient sampling technique selected 60 intensive care unit nursing staffs.

Variables

Dependent variable: Preventive measures of varicose vein

Independent variables:

Age, experience, Gender, educational status, Marital status, residence area, Regular exercise Body mass index, duty hours.

Operational definition

Varicose vein: are swollen, twisted blood vessels that bulge underneath the skin.

Prevention: Treatment for varicose veins may include self-care measures, compression stockings, and surgeries or procedures

Intensive care unit: a unit in a hospital providing intensive care for critically ill or injured patients that is staffed by specially trained

Staff nurse: plans and provides compassionate and competent care to patients and service users based on current evidence of best practice

Data quality control

The data collection questionnaires were pretested on 5% of the sample size one week before the actual data collection date and will be reviewed in areas other than the study area. Following the pretest, the tools will be edited and changed to meet the study's objectives. The consistency of the data was monitored during the collection process by closely monitoring the data collectors and the collection method, as well as reviewing the collected data on a regular basis. Any items missing from the questionnaire that the data collectors misunderstood were immediately checked by the supervisors and corrected for the next day of data collection with the principal investigators.

Data processing and analysis

The collected data was washed, coded, and entered into the SPSS program before the actual study began. The data will be entered and analyzed using the statistical kit for social sciences (SPSS) version 20; the findings will be presented in a detailed description using frequencies, proportions, and cross tabs. Association between dependent and independent variables with a P-value less than 0.05 were considered statistically significant.

Result

Table:1: Socio-Demographic Characteristics of respondents

Characteristics		Frequency	Percentage (%)
Age	20-25	16	26.67
	26-31	29	48.33
	32-37	15	25
Gender	Male	25	41.67
	Female	35	58.33
Experience	<3 Years	37	61.67

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	4-6 Years	16	26.66
	7 Years	7	11.66
Educational status	G.N.M	20	33.33
	B.sc	20	33.33
	P.B.Bsc	15	25
	M.sc	5	8.33
Marital status	Married	24	40
	Unmarried	36	60
Residency	Urban	32	53.33
	Rural	28	46.67
Regular exercise	Yes	25	41.66
	No	35	58.34
BMI	Under weight (BMI <18.5)	20	33.33
	Normal(BMI 18.5-24.9)	13	21.67
	Obese, BMI above 30	27	45
Duty hours	8 hrs per day	60	100

As shown in the **Table (1)**, A total of 60 staff nurses took part in the study, resulting in a 100% response rate. According to the study, 29 respondents (48.3%) were age group between 26-31 years and 16 (26.67%) of the respondents were between the ages of 20-25 years and 25(25%) were between 32-37 years respectively. Regarding the gender of respondents, 35 (58%) are Female, 25 (41.67%) were male. Regarding experience of the respondents, 37(61.7%) were less than 3 years, 16(26.66%) were 4-6 Years and 7(11.66%) were more than 7 years.

Regarding educational status of respondents 20(33.33%) were diploma nursing, 20(33.3%) were B.Sc Nursing and 15 (25%) were P.B.sc Nursing and 5(8.33%) were MSc Nursing. Regarding marital status 24(40%) were Married and 36(60%) were unmarried. Regarding residency 32(53.33%) were urban area and 28(46.67%) were rural areas. Regarding regular exercises 25(41.66%) were yes doing regular exercises and 35(58.34%) were no regular exercises.

Regarding body mass index 27(45%) were BMI ABOVE 30, 20(33.33%) were BMI<18.5% and 13(21.67%) were BMI normal. Regarding daily duty hours most of the staff nurses 60(100%) were 8 hours per day.

Table:2: Risk factor and preventive measures of varicose vein

Characteristics	Preventive measures of varicose vein	
	F	Percentage
Good knowledge	16	26.6%
Average Knowledge	34	56.6%
Poor knowledge	10	16.7%

According to Table 2, 16 (26.6%) staff nurses had good knowledge regarding prevention of varicose vein, 34 (56.6%) had Average knowledge regarding prevention of varicose vein, and 10 (16.7%) had poor knowledge regarding prevention of varicose vein.

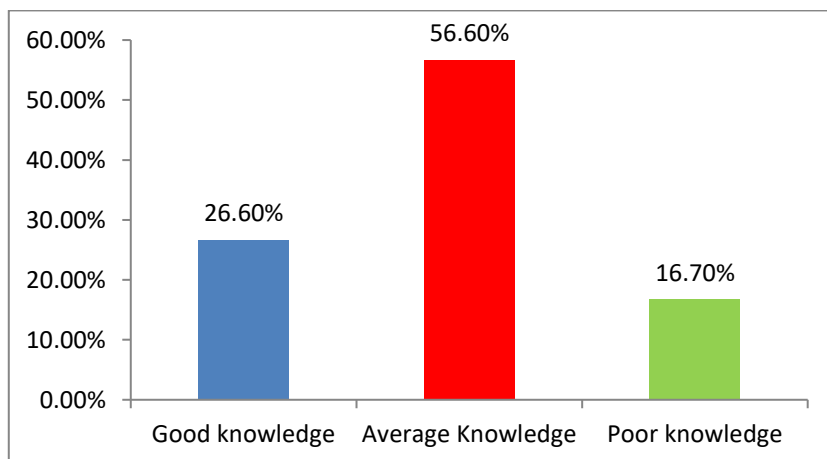


Fig:1: Bar diagram depicting the levels of staff nurse's knowledge regarding risk factor and preventive measures of varicose vein

Table: III: Associate the between knowledge regarding risk factor and preventive measures of varicose vein with selected demographic variables. (N=60)

variables		Level of knowledge			Total	Chi square df	P value
		Good	Average	poor			
Age (In Year)	20-25	5	12	2	19	2.37	0.873
	26-31	8	10	4	22	2	NS
	32-37	3	12	4	19		
Gender	Male	8	14	6	28	0.330	0.391
	Female	8	20	4	32	1	NS
Experience (In Year)	<3	6	14	5	25	0.975	0.807
	4-6	5	10	3	18	3	NS
	>7	5	10	2	17		
Educational status	G.N.M	4	15	3	22	2.052	0.00*
	B.Sc	2	10	3	15	3	S
	P.B.Bsc	4	4	3	11		
	Msc	6	5	1	12		
Marital status	Married	9	24	5	38	7.599	0.355
	Unmarried	7	10	5	22	3	NS
Residency	Urban	8	23	6	37	7.599	0.355
	Rural	8	11	4	23	3	NS
Regular exercise	Yes	9	20	6	35	7.599	0.355
	No	7	14	4	25	3	NS
BMI	Under weight (BMI <18.5)	5	18	4	27	1.438	
	Normal(BMI 18.5-24.9)	6	10	4	20	2	0.492
	Obese, BMI above 30	6	6	1	13		NS
Duty hours	8 hrs per day	16	34	10	60	2.0842	0.652NS

Abbreviations: *P-Value<0.05,S-Significant,NS-Not significant

Table 3 demonstrates that demographic factors including age, gender, experience, Marital status, residency, regular exercises, Body mass index were no statistically significant relationship with knowledge regarding risk factor and preventive measures of varicose vein at the $P < 0.05$ level of significance. Educational status of staff nurses significant association with knowledge regarding risk factor and preventive measures of varicose vein at the $P < 0.05$ level of significance.

Discussion:

A cross-sectional study was conducted to look at the prevalence and risk factors for VVs among surgeons and operating room personnel at Buraidah Central Hospital in Saudi Arabia. They usually become worse over time once they develop, which highlights the importance of early intervention and preventive actions. Methodology Data from 91 participants were collected from diverse healthcare professionals between August 2023 and September 2023 via an online questionnaire covering demographics, health, and occupational factors. The chi-square and Fisher's exact tests were employed to examine the correlation between these variables and the occurrence of VVs. Results revealed that the data analysis revealed that several specific factors displayed notable associations. Occupations as Surgical Physicians, OR Staff, or Nurse ($p=0.009$), the number of days worked in the operating room ($p=0.040$), the role in the operating room, especially those mainly standing ($p=0.001$), contraceptive pill usage ($p=0.000$), and vaginal delivery ($p=0.037$) displayed statistically significant relationships with VVs. In contrast, factors like gender, age group, ethnicity, family history of VVs, social status, smoking habits, exercise frequency, BMI, lifting heavy objects, and years in the field did not reveal substantial associations with VVs, as indicated by p-values exceeding 0.05. study concluded that the study identified a low VV diagnosis prevalence, with an equal distribution among male and female respondents. Key factors that contribute to the risk of developing VVs include the number of days worked in the operating room, the role in the operating room, a family history of VVs, contraceptive pill usage, and the method of delivery [7].

A cross-sectional study was conducted to design to find out the knowledge among nurses regarding risk factors and prevention of varicose veins. A self-administered questionnaire was used to find out knowledge regarding the prevention of varicose veins among nurses of Patan Hospital, Patan Academy of Health Sciences, Lalitpur, Nepal during May-Jul 2019. A systematic random sampling technique was used. Data were descriptively

analyzed for frequency and percentage regarding years of job, workstation, and knowledge about the varicose veins. Ethical approval was obtained for the study. Result showed that Out of 211 nurses, 73(34.6%) had an inadequate level of knowledge, 101 (47.9%) had moderate and 37(17.5%) adequate level of knowledge regarding the prevention of varicose veins. One-third, 66(31.3%) had 5-10 y and the same number had >10 y work experiences. The mean knowledge score was 63.1 ± 18.0 . study concluded that The majority of the respondents 101(47.9%) had a moderate level of knowledge and one-fifth had an adequate level of knowledge regarding the prevention of varicose veins[8].

Conclusion:

Study concluded that staff nurses required proper education about prevention of varicose vein 26.60% of the staff nurses had good only, so staff nurses required proper education and awareness about varicose vein

Competing interest:

The authors report no conflicts of interest for this work.

Authors' contributions

All authors were involved in the interpretation of the data and contributed to manuscript preparation. All authors have read and approved the final version of the manuscript

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