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A comparative study to assess the risk of varicose vein among critical care nurses and nurses working in other nursing units of selected hospital, Guwahati, Assam

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Original article

A comparative study to assess the risk of varicose vein among critical care nurses and nurses working in other nursing units of selected hospital, Guwahati, Assam

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Abstract

Background: 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. **Method:** 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.**Results:** 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). **Conclusion**: 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.

Key words: Critical care, risk of varicose vein, nurses, varicose vein

Introduction

A varicose vein is a palpable subcutaneous vein that is dilated, tortuous, saccular, and generally larger than 3mm and mainly seen in lower limbs. It is invariably associated with local valvular incompetency and is more common in women than men. Varicose veins are known to be more common among profession such as police personnel, teachers, nurses, shopkeepers, and bus conductors, who stand for long time during their duties. Even though the exact cause of varicose vein is unknown, there are some contributory factors responsible for varicose vein. Some of the major risk factors are age, gender, pregnancy, family history, and prolonged standing. Among these risk factors, nurses have the two important risks - gender and prolonged standing during duty hours. They are at higher risk of developing varicose vein because of their nature of job, which requires prolonged standing at patient bedside and this increases their risk of getting varicose vein later in their life. With regards to the gender, majority of the nurses are female nationwide and internationally (Laurikka, 2002).

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A cross-sectional study was conducted on 364 nurses, who were working at various hospitals in Udaipur and Rajasthan. Data was collected through a self-administered questionnaire. The nurses having lower limb varicose vein were the participants to clinical examination by the experts for confirmation of the diagnosis. It was found that 88 nurses (24.17%) have lower limb varicose vein. The female nurses have slightly higher prevalence compared to the male nurses (24.50% vs 22.58%). The occupational risk factors responsible for lower limb varicose vein among nurses were longer work history (40.42% p<.001) and longer working hours of >8 hrs (38.70 %) (Mishra, Solanki, & Mishra, 2015).

Objectives

1. To assess the risk of varicose vein among critical care nurse and nurses working in other general units of selected hospital.
2. To compare the risk of varicose vein among critical care nurse and nurses working in other general units of selected hospital.
3. To find out the association between risk of varicose vein with the selected demographic variables.

Materials and methods

A non-experimental descriptive research design was used for the study to accomplish the objectives. Convenience sampling technique was used to obtain the samples of 100 staff nurses working in Guwahati Neurological Research Centre (GNRC), Guwahati Assam. The sample comprised of 50 critical care nurses and 50 nurses working in other unit, who fulfilled the inclusion criteria, were interested in the study and also were available at the time of data collection.

Tools for data collection

Tool 1: Demographic proforma: It included age, gender, marital status, area of work, total day/night duty, years of experience, history of hospitalization, sources of information, and use of crape bandage/stocking during duty hours.

Tool 2: Varicose vein risk assessment tools: It was developed for the assessment of risk of varicose vein among the critical care nurses and nurses working in general units. The checklist consisted of 23 items. For each correct answer a score of one and for each wrong answer a score of zero was given. The total maximum score was 23. The score was categorized as: Low risk (1-7), Moderate risk (8-16), and High risk (17-23).

In order to ensure the content validity, the tools were given to five experts from the fields of medicine, surgery, and medical surgical nursing. Modifications were made according to the opinion and suggestions of the experts. The reliability of varicose vein risk assessment tool was computed using Karl Pearson Correlation Coefficient (Inter-Rater method). The reliability of the tool was found to be r=.99 which indicated that the tool was reliable.

Procedure for data collection

Prior to the data collection the ethical permission was obtained from the Ethics Committee of Assam downtown University, Panikhaiti, Assam. A prior permission was obtained from the higher authority of GNRC Hospital, Dispur, Assam. The nurses from the institution were selected based on the inclusion criteria. On the first day, the objective of the study was explained to the nurses and an informed consent was also taken from the nurses before starting of the data collection.

Results

The demographic data findings revealed that majority of the staff nurses (53%) were from age group of 20-25 years, 99% staff nurses were female, 80% staff nurses were unmarried, 64% staff nurses had 1-5 years of experience, 50% nurses were critical care nurses, and 50% were from general units, 74% staff nurses had day duty >2 weeks, 64% staff nurses had one week night duty/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.

Table 1:
Mean Difference (MD), Standard Deviation (SD) And "t" Value of Assessment Tools for Varicose Vein

N=100

Group	Mean	MD	SD	*t*-value	*p*-value
Critical care unit	9.78		3.99		
General units	5.18		3.78		
		4.6		5.86	<.05

*df=98, *significant at .05 level*

The mean score of critical care nurses score (M=9.78, SD=3.99) (Table 1) was higher than the mean score of nurses working in general units score (M=5.18, SD=3.78) (Table 1), so the findings revealed that

the risk of developing varicose veins among nurses working in critical care units is higher as compared to nurses working in general units.

Chi-square was computed to find out the association between risk of varicose vein score and demographic variables. The result showed there is a significant association present with age, total year of experience, total day duty, total night duty, and sources of information among critical care nurses (Table 2) and age, total year of experience, and sources of information among nurses working in other units (Table 3).

Table 2:
Association Between Risk of Varicose Vein Among Critical Care Nurses with Selected Demographic Variables

N =50

Category	Assessment tools for varicose vein			Chi Square value	df	Inference
	Low	Moderate	High			
Age in years						
20-25	5	11	-			
26-30	5	15	3	4.84	6	S
31-35	2	4	1			
>35	-	4	-			
Year of experience						
1-5 years	7	20	-			
6-10 years	5	7	4	13.17	4	S
1 1 - 1 5 years	1	5	-			
>15 years	1	-	-			
Total day duty/month						
1 week	-	2	-	3.58	4	S
2 weeks	4	8	2			
>2 week	10	22	2			
Total night duty/month						
1 week	8	16	-			
2 weeks	6	13	4	6.64	4	S
>2 week	-	3	-			
Sources of information regarding varicose vein						
Family members	1	1	-			
Friends and peers	3	3	-			
Health care personnel	6	14	2	2.97	6	S
Others	4	14	2			

S= significant, NS= not significant at p< .05

Table 3:
Association Between Risks of Varicose Vein Among General Nurses in Other Units with Selected Demographic Variables

N=50

Category	Assessment tools for varicose vein			Chi Square value	df	Inference
	Low	Moderate	High			
Age						
20-25	32	5	-			
26-30	3	5	-	10.72	6	S
31-35	3	-	-			
>35	1	1	-			
Year of experience						
1-5 years	30	7	-			
6-10 years	5	4	-	2.58	4	S
11-15 years	3	1	-			
>15 years	-	-	-			
Sources of information regarding varicose vein						
Family members	-	1	-			
Friends and peers	1	-	-			
Health care personnel	20	6	-	7.78	6	S
Others	18	4	-			

S= significant, NS= not significant at p< .05

Discussion

The findings of the present study revealed that there was a significant association between risk of varicose vein score and demographic variables such as age, total year of experience, total day duty, total night duty, and sources of information among critical care nurses. The findings of the present study revealed that there was a significant association between risk of varicose vein score and demographic variables such as age, total year of experience, and sources of information among nurses working in other units. The present study findings were supported by the study conducted on 541 Japanese women, the prevalence rate was 45%, while in other study conducted in Shanghai area of China on 30,712 workers, the prevalence rate was 8.39% of lower limb varicose vein. The reported prevalence rate of varicose vein differed from one series to another ranging from 2% to 56% in men and 1% to 73% in women probably

affected by various factors like age, sex, gender, etc. The other non-interventional risk variable was having longer years of service. Interventional variables were long standing hours, overtime work, and body mass index status (Sun, 1990).

Conclusion

The present research study was carried out to assess the risk of varicose vein among critical care nurses and nurses working in other nursing units of selected hospital, Guwahati, Assam. The findings of the study revealed that there was a marked increase in risk of developing varicose veins among nurses working in critical care units than that of nurses working in general units. Since the nurses of critical care units spend most of the time standing, they are prone to get lower limbs symptoms like itchiness, cramps, burning sensation, pain, etc., which result in superficial swollen veins, which later develop into varicose veins. So, there is a need to educate the critical care units' nurses regarding these conditions in order to prevent it.

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References

Amanda, J. L. (2003). Lifestyle factors and the risk of varicose veins *Journal of Epidemiology*.56 (2):171-173.

Lewis, S.L., Heitkemper, M.M., Dirken, S.T., O'Brien, P.G., & Bucher, L. (2011). *Medical Surgical Nursing: Assessment and Management of Critical Problems*. Haryana: Elsevier.

Mishra, N., Solanki, S., Mishra, S. (2015). Lower limb varicose veins among nurses: A cross sectional study in Udaipur *International Journal of Current Research and Review*. 7(24): 51-55.

Sun, J.M. (1990). Epidemiologic study on peripheral vascular diseases in Shanghai. *Zhonghua Wai Ke Za Zhi*. 28:480-483. 510–481.

Weiss, R. A., Weiss, M. A. (1993). Doppler ultrasound findings in reticular veins of the thigh sub dermic lateral venous system and implications for sclerotherapy. The *Journal of Dermatologic Surgery and Oncology, 19* (10): 947–51. PMID 8408914.

Laurikka, J.O.(2002). Risk indicators for varicose veins in forty to sixty years olds in the Tampere varicose veins study. *Journal of Surgery*.26 (6): 648-51.