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Research Article

KNOWLEDGE OF VARICOSE VEIN AMONG SECURITY GUARDS:A DESCRIPTIVE CROSS-SECTIONAL STUDY

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ABSTRACT

The people who are involved with prolonged sitting or standing in their day to day activities tend to have an increased risk for varicose veins. The reason is the same for the security guards, who are as a part of their profession need to stand for prolonged periods, placing them at the highest risk of developing varicose veins.

Objectives: This study was designed to assess the knowledge of varicose vein among security guards.

Methods: A descriptive cross-sectional study was done among 100 security guards working in Mangaluru with a minimum one year of service as a security guard was included in the study. Samples were selected by non-probability purposive sampling. The data was collected using a valid structured knowledge questionnaire.

Results: Out of 100 security guards, majority 70% had the average knowledge, 27% had poor knowledge and only 3% had good knowledge.

Conclusion: The present study aimed at assessing the knowledge of varicose veins among the security guards. According to the findings of the study, security guards are having average knowledge about varicose vein.

INTRODUCTION

The work environment constitutes an important part of man's total environment. Health to a large extent is affected by work conditions. Occupational environment too plays a major role on the health of the exposed. The health hazards get more severe when the duration of exposure increases.[1]

Millions of workers spend the majority of the working day on their feet and many hours in static positions. Prolonged standing can lead to tiredness, loss of concentration and increased health risks such as the swelling of feet and legs, feet and joint damage, varicose veins, heart and circulatory disorders and lower back problems. Severe varicose veins can have an impact on the lives of the people who work on their feet especially the teachers, nursing staffs, flight attendants, dental staff, traffic and bar workers, postal workers, construction workers and bank staff. [2] The reason is the same for the security guards, who are as a part of their profession need to stand for prolonged periods, placing them at the highest risk of developing varicose veins[2].

The term varicose derives from the Latin 'varix', which means twisted. A varicose vein is usually tortuous and dilated. Under normal circumstances, blood collected from superficial venous capillaries is directed upward and inward via one-way valves into superficial veins. These, in turn, drain via perforator veins, which pass through muscle fascia into deeper veins buried under the fascia. Leakage in a valve caused retrograde flow back into the vein. Unlike deep veins which are thick-walled and confined by fascia, superficial veins cannot withstand high pressure and eventually become dilated and tortuous. The failure of one valve puts pressure on its neighbours and may result in retrograde flow, and hence varicosity, of the entire local superficial venous network. The superficial veins in the legs are normally involved, as these are most likely to come under hydrostatic pressure due to gravity.[3]

According to WHO, approximately 2% of the western population have a primary varicose vein, women are having 3-4 times more than men. Varicose veins are less common in the Eastern population, particularly among Africans and Indians. The world prevalence of varicose veins usually means the estimated population of people who are managing varicose

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veins at a given time. Statistics by country for prevalence of varicose veins is 45 per 1000. It is approximately 1 in 22 or 12.2 million people in U S A.[4]

According to one estimate, 15 to 20 percent of the population in India is suffering from varicose vein disease these days. Women suffer from this disease four times more than men. Today a lot of occupations and professions have sprung up where a person is required to either constantly stand up for a long time or made to sit with legs hanging down for a considerable time. Computer professionals, nurses, receptionists, security guards, traffic policemen, Salesmen, teachers and persons doing desk jobs are the worst sufferers of Varicose veins.[5]

A cross-sectional study was done to know the prevalence of varicose veins in Karnataka. Total numbers of 3402 patients were examined for oral and other varices. Oral varices were much more common than varicosities of other veins. Varices were found to increase with age. The overall prevalence rate was 59.3 per 1000. This rate was highest in 60 years age group being 329.94 per 1000. The study shows that old age people are more prone to get varicose vein compared to younger.[6]

According to experts in vascular diseases, three to five percent of the population suffers from severe venous problems. In India, varicose veins affect 1 out of 2 people over age 50, whose occupation requires prolonged standing. In Bangalore 3-5% of population suffers from venous problems, 10% of population is having varicose vein.[7]

As varicose veins cannot be cured, the best course of action is prevention. some self-care measures that can help in the prevention of varicose veins are avoiding crossing the legs when sitting, exercising regularly, maintaining a healthy body weight, avoiding tight clothing that constricts the legs, groin or waist, avoiding constipation when standing for long periods, shifting weight from one leg to the other every few minutes, elevating legs, eating a high-fibre, low-salt diet, avoiding high heels and tight hosiery, changing sitting or standing position regularly and avoiding long periods of standing or sitting which can ease pain and prevent varicose veins from getting worse.[8,9,10]

MATERIALS AND METHODS

Research approach and design: Descriptive survey approach with non-experimental research design was used for the study. The population of the study was security guards. Non-probability purposive sampling technique was used to select samples (n=100).

Sample and sampling technique: Non-probability purposive sampling technique was used to select the sample for the study. The final sample size was 100. A pilot study was conducted to find out the feasibility of the study.

The data collection procedure: The data collection tool consists of demographic data and a valid structured knowledge questionnaire on the varicose vein. Content validity of the tool was done by 7 experts. 6 experts from the field of general surgery, 1 expert from the field of Medical Surgical Nursing. The reliability of the tool was determined using the split half method.A written informed consent was obtained from each of the participants. The anonymity of the subjects and confidentiality of the data were maintained. Data was collected from July21 to August 3, 2016.

Statistical analysis: Data collected from the sample were analysed by descriptive and inferential statistics.

RESULTS

The Sample Characteristics of the Study population is depicted in Table 1.

Table 1 Frequency and Percentage Distribution of Sample Characteristics

n=100

SL.NO	Demographic Profile	Frequency (f)	Percentage (%)
1.	**Age in years**		
	30-39 years	18	18
	40-49 years	64	64
	50-59 years	18	18
2.	**Gender**		
	Male	93	93
	Female	7	7
3.	**Pregnancy**		
	Pregnant	0	0
	Non-pregnant	100	100
4.	**Use of pills**	0	0
5.	**Marital status**		
	Married	100	100
	Unmarried	0	0
	Widow/divorced	0	0
6.	**Education**		
	No formal education	0	0
	Primary(1-7)	15	15
	Secondary(8-10)	63	63
	PUC	21	21
	Diploma	1	1
	Degree	0	0
	Post-graduation	0	0
7.	**Total hours of work**		
	12 hours	100	100
8.	**Total experience as security guard**		
	1-9 years	62	62
	10-19 years	30	30
	20-29 years	8	8
9.	**Posture during work**		
	Sitting	8	8
	Standing	65	65
	Walking	27	27
10.	**Family history of varicose vein**		
	Yes	1	1
	No	99	99
11.	**Areas of posting**		
	Colleges	9	9
	Hospitals	80	80
	Hostels	0	0
	Banks& ATM centres	11	11
	Others	0	0
12.	**Source of information**		
	Family members	5	5
	Friends& peer	38	38
	Health care personnel	53	53
	Others	4	4
13.	**History of hospitalization due to varicose veins**		
	Yes	0	0
	No	100	100

The findings of the study demonstrated that among 100 security guards surveyed, Majority (64%) belong to the age group of 40-49 years, maximum number of subject were male

gender (93%), All subjects were married (100%), Most subjects belongs to secondary education category (63%), Majority (62%) were having 1-9 years of experience, Majority (99%) of subjects were not having history of varicose vein, Majority (65%) were standing during work, Majority (80%) of them are posted in hospital, 63% of subjects obtained information from health care personnel, 38% were obtained from friends and peer, 5% were obtained from family members, 4% were obtained from others.

Distribution of subjects according to their knowledge score is depicted in figure 2

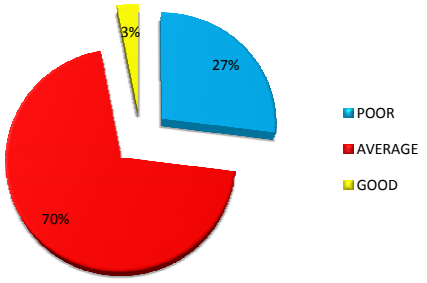

Figure 2 Pie diagram depicting the percentage of knowledge scores of security guards

The data presented in figure 2 shown that many of the subjects had average knowledge (70%), followed 27% for poor knowledge, 3% have good knowledge.

Table 2 Mean, Median, Mean percentage and Standard deviation of knowledge

n=100

Max possible score	Min score obtained	Max score obtained	Mean	Median	Mean %	Standard deviation
21	2	15	9.10	9	42.85	2.588

The data presented in table 2 shows that mean percentage of overall level of knowledge scores was 42.85% which indicate that average level of knowledge among security guards regarding varicose vein.

Table 3 Chi square value showing the association between knowledge scores and selected demographic variables.

n=100

Sl.No	demographic variables	Knowledge score			χ^2	df	P value
		Poor	Average	Good			
1	**Age in years**						
	30-39	6	12	0			
	40-49	15	47	2	2.11	4	0.71
	50-59	6	11	1			
2	**Education**						
	Primary	5	10	0			
	Secondary	15	46	2	3.996	6	0.67
	PUC	6	14	1			
	Diploma	1	0	0			
3	**Years of experience**						
	1-9	16	45	1			
	10-19	7	21	2	4.24	4	0.37
	20-29	4	4	0			
4.	**Source of information**						
	family members	1	4	0			
	Friends and peers	9	28	1	1.862	6	0.93
	Health care personnel	15	36	2			
	others	2	2	0			

The chi square presented in Table 3 shows that there is no significant association between the knowledge scores and demographic variables such as age($\chi^2_{(4)}$=2.11,P=0.71), education($\chi^2_{(6)}$=3.9,P=0.67), years of experience($\chi^2_{(4)}$=4.24,P=0.37), source of information($\chi^2_{(6)}$=1.86,P=0.93).

DISCUSSION

The present study revealed that majority of the security guards are having average knowledge regarding the varicose veins and the mean percentage of overall level of knowledge is 42.85. It was found that there is no association between the knowledge scores and the selected demographic variables such as age, education, years of experience and source of information.

India consists of various populations with different types of occupations. The list of occupational hazards just seems to be increasing. People are expected to respond to a variety of situations that may arise while they are on duty. Varicose veins have become a serious threat to the lives of millions of people across the globe and are said to be ignored by people living across India especially the security guards. There is an urgent need to spread awareness about varicose veins in India. Many of the security guards suffer from it, but most tend to ignore it and that is not good as it can lead to complications in the advanced stage. Though there is a high prevalence of varicose veins in India, but very few studies have been conducted in India. Researcher personally has observed that most of the security guards were unaware of varicose veins, and also their preventive measures. Hence, there is a need to conduct an awareness program on knowledge regarding varicose vein not only among the security guards but also the people who are in risk of getting varicose veins.

CONCLUSION

The present study aimed at assessing the knowledge of varicose veins among the security guards. According to findings of the study, security guards are having average knowledge regarding varicose veins. Further studies are required to provide awareness programme on varicose veins prevention and management to security guards.

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