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ORIGINAL ARTICLE

# Assessment of Knowledge on Prevention of Varicose Veins among the Security Guards at a Selected Security Recruitment Agency with a View to Develop an Information Booklet at Mangaluru

**Sunitha Priya Menezes**
Lecturer, Medical Surgical Department, Father Muller College of Nursing, Mangaluru.
E-mail: sunitha.menezes.2014@fathermuller.in

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## Abstract

**Background and objectives:** Millions of workers spend majority of their working days on their feet and many hours in static positions. Prolonged standing causes muscles to strain while the blood remains in the legs, feet and cannot circulate properly. This results in inflammation of the veins and over a period of time, this can progress to varicose veins. The study was conducted to assess the knowledge on prevention of varicose veins among the security guards by using a structured questionnaire.

**Methods:** Descriptive design was used for the study. A non probability purposive sampling technique was used to select 60 security guards from a selected security recruitment agency. The investigator assessed the knowledge regarding prevention of varicose veins using demographic proforma and a structured knowledge questionnaire. Following this, an information booklet was administered to the subjects. The collected data were analysed using descriptive and inferential statistics.

**Results:** Mean pretest knowledge score was found to be 13.4±5.07. There was a significant association between knowledge scores and demographic variables such as age, education status, and previous information (T = 3.84 at 0.05 level of significance). H1 was accepted and H0 was rejected. No significant association was found between knowledge scores and demographic variables such as gender, religion, work experience, monthly income, working hours, and source of information (T=3.84 at 0.05 level of significance). Hence HO was accepted and H1 was rejected.

**Conclusion:** The information booklet was effective in enhancing the knowledge among security guards regarding the prevention of varicose veins. The results of the present study show that there is a great need for increasing awareness among security guards regarding the prevention of varicose veins.

**Keywords:** Varicose veins, Security guards, Security recruitment agency, Information booklet

## Introduction

Working conditions of individuals affect their health and their environment. Increased exposures lead to occupation-related health hazards. Varicose veins are more common in women than men due to pregnancy and hormones.[1] Due to prolonged durations of standing posture, the development of varicose veins is often noted among various professionals like teachers, staff nurses, security guards, police personnel, bus conductors, construction workers, industrial workers, etc. According

to reports of International Statistics, approximately 25% of women and 18% of men are found to be affected with varicose veins among general population. Framingham study reports showed that about 27% of Americans were affected with some form of varicose disease in their legs. About 20 to 25 million Americans suffer from varicose veins. It is estimated that about 10 to 20% of the general Indian population tend to develop varicose veins during their lifetime.[2]

Varicose veins is a very common condition with a lower predilection for men compared to women. The incidence rate of varicose veins is 30% among women, while it is 15% in men. Lack of awareness about the condition is common among patients suffering from varicose veins.[3] Numerous employees function in vertical positions on their feet for most of their working hours. In this position, the energy used is 20% more compared to the seating position and since body parts are not outlined to stand while doing job, frequent standing can cause exhaustion, inattentiveness and increases the threat to health. All these lead to problems such as inflammation of veins, swelling in lower extremities, damage to the joint, circulatory and heart disorders, pregnancy complications, etc.[4] The incidence has risen up to 40% and 70% among men and women respectively among the department store employees of older age group.[5]

The number of security guards suffering from varicose veins is growing. It is a debilitating condition that often occurs because of the high pressure exerted on the lower extremities during walking and standing. In a population-based evaluation, visible venous disease was discovered in over 80% of the population.[6]

With the given background, the study aimed to assess the knowledge regarding the prevention of varicose veins among security guards working at a selected security recruitment agency in Mangaluru and to develop an information booklet regarding the same.

## Materials and Method

### Settings and design

A descriptive study was conducted at a selected security recruitment agency in Mangaluru, in December 2020.

### Sample size and sampling design

Based on the results of the pilot study, 60 subjects were selected by purposive sampling technique from a security recruitment agency.

### Study instrument

Data was collected by administering a questionnaire. It included two parts - baseline proforma and the questions. Baseline proforma included background information of the participants. Reliability of the questionnaire was assessed by conducting a pilot study involving 10 subjects.

### Study variables

Knowledge of security guards regarding prevention of varicose veins was the dependent variable and demographic variables were age, gender, religion, working experience, education status, monthly income, working hours, previous information, occupation, and source of information.

### Data collection procedure

Prior permission was obtained from the ethical committee and concerned authority of security recruitment agency in Mangaluru. Consent was also taken from each of the participants willing to participate in the study. In this study, the data collection instruments were: Demographic proforma and structured knowledge questionnaire. Pre-testing of this tool was done among 10 security guards fulfilling the sampling criteria. Subjects were able to fill the tool within 25-30 minutes. The tool was found to be feasible. No modifications in the items were made.

### Statistical analysis

The association among selected demographic variables was done in terms of descriptive (mean, median, percentage) and inferential statistics (Chi-square test).

## Results

The study findings revealed that 40% (24) of the respondents were 25-35 years of age, 33.3% (20) were 36-45 years of age, 20% (12) were 46-55 years of age and 6.7% (4) were 56 years and above. The majority of the subjects, 24 (40%) were in the age group of 25-35 years. Most of the subjects were males (75%), Hindus (41.7%), and with 0-5 years of working experience (60%). The majority of the participants completed secondary school (28.3%) and had a monthly income of 10,000 and above (36.7%). The majority of the subjects worked for 8-10 hours (56.7%), were unaware of varicose veins and their prevention (57.3%), and reported mass media as the source of information (40%).

**Table 1:** Level of knowledge level and scores of security guards regarding prevention of varicose veins

| Score | Level of Knowledge | Frequency | Percentage |
|---|---|---|---|
| 0-10 | Poor | 31 | 51.6 |
| 11-24 | Moderate | 25 | 41.7 |
| 21-30 | Good | 4 | 6.7 |

**Part 2:** Association between the knowledge scores of security guards regarding prevention of varicose veins and the selected demographic variables

| Table Range, maximum scores, means, | Range of scores | Maximum possible score | Mean | Median | Standard deviation |
|---|---|---|---|---|---|
| Knowledge scores | 4-23 | 23 | 13.4 | 10 | 5.07 |

**Part I:** Knowledge score of the security guards regarding prevention of varicose veins

Investigator found that most of the participants i.e., 31 (51.6%) had inadequate knowledge, 25 (41.7%) had moderate levels of knowledge and 4 (6.7%) had adequate knowledge on prevention of varicose veins. The mean knowledge score was 13.4±5.07 and the median value of the knowledge score was 10.

**Part II:** Description of the knowledge level and scores of security guards regarding prevention of varicose veins

Data in Table 2 shows that knowledge scores were in the range of 4-23. The data also depicts that the mean knowledge score was13.4±5.07, and the median value of knowledge score was 10.

The Chi-square test was used to determine the association between knowledge scores and all the related demographic variables. The following null hypothesis was formulated.

**$H_1$:** There is a significant association between the knowledge scores of security guards and their selected demographic variables at 0.05 level of significance.

It is shown that the information booklet was effective in enhancing the knowledge of security guards regarding the prevention of varicose veins. The security guards were following the instructions mentioned in the information booklet. The overall experience of conducting this study was a satisfying one as there was good cooperation from the participants. This study was a new learning experience for the researcher. The results of the present study shows that there is a great need for awareness regarding the prevention of varicose veins among security guards.

## Discussion

The findings of the study were supported by a descriptive cross-sectional study which was conducted for assessing the knowledge regarding varicose veins among security guards. The findings revealed that out of 100 security guards, the majority (70%) had average knowledge, while 27% had poor knowledge and only 3% had good knowledge. In similar lines with the previous study conducted by Upendrababu *et al*., this study concludes that security gaurds have average knowledge regarding vericose veins.[7]

## Conclusion

The current research was conducted to assess the knowledge on the prevention of varicose veins among security guards working at a selected security recruitment agency in Mangaluru with a view to developing an informational booklet. The present study design was a descriptive research design, and the data was collected from security guards who were recruited by using a non-probability purposive sampling technique. Data was collected using a structured knowledge questionnaire regarding the prevention of varicose veins.

The results indicate that the information booklet was effective in enhancing the knowledge of the security guards regarding the prevention of varicose veins. The overall experience of conducting this study was a satisfying one as there was good cooperation from the participants. This study was a new learning experience for the researcher. The results of the present study show that there is a great need for increasing awareness among security guards regarding the prevention of varicose veins.

## Conflict of Interest

Nil

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