



## Knowledge Regarding Prevention of Varicose Vein among Traffic Police Working in Kathmandu

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### Abstract

**Aim of the Study:** To assess the level of knowledge regarding prevention of varicose vein in traffic police.

**Introduction:** Varicose veins have become a serious threat to lives of people in different profession such framers, teachers, civil service as well as in traffic police. Among all occupation traffic police are the highest chance of varicose vein. Many traffic police are suffering from it, but most tend to ignore it.

**Methods:** A quantitative approach of descriptive cross-sectional study design was used to assess the knowledge regarding prevention of varicose vein among traffic police.

**Results:** Result shows that majority of respondents were male (64%) and minority were female 935%). Similarly, head constable was in higher (52%) and 22% were sub inspector. More respondent 81.1% are working more than 10 hours. About 24.2% have education of educational level and just 1.1% have got bachelor and more level education. Most of the respondent from 64.4% were from hilly region, 33.3% from Terai and 2.2% from Himalayas. Majority 93.3% respondents had not heard about varicose vein. Only 6.7% respondent heard about varicose vein.

**Conclusion:** Varicose vein is the one of the cases of morbidity now, days in Nepal. Many of people have no more idea about varicose vein, its cause, prevention and management. Due to lack of knowledge, negligence, geographical situation, prolong job duty hours' prevalence the varicose vein rate higher. Need to have educational intervention program. To those prolong standing people and awareness program is necessary to them to prevent varicose vein and prevent from its complication.

**Keywords:** Varicose Vein; Traffic Police; Nepal; Knowledge

### Background of Study

Varicose veins are common in the superficial veins of the legs which are subject to high pressure when standing. Accumulation of more and more venous blood in the superficial venous system makes the superficial veins dilated and tortuous. A vein that has enlarged and twisted often appears as a bulging, blue blood vessel that is clearly visible through the skin. Varicose vein is most common in older adults, particularly women, and occur especially on the legs [1]. A Scottish cohort study has found a higher prevalence

of varicose of the saphenous trunks and their main branches in men than in women (40% men v 32% to 40% in men, and 1% to 73% in women [2]. In India varicose vein affect one out of 2 people over age of 50. Varicose veins are more common in women than men. Varicose veins are painful and varicose vein can be dark purple or blue and look twisted and bulging [3]. The Annual report of the Department of Health Services (DoHS) of Nepal for 2071/72 (2014/15) is the 21<sup>st</sup> consecutive report which says: Varicose veins of lower extremities without ulcer or inflammation, In Nepal total

number of incidence of varicose vein is 65 among them 46 in male (70.77%) and 19 is in female (29.23%) without any mortality [4].

A study of A study Dhulikhel hospital from September 2012 to July 2013, there are about 47% male and 53% female are suffering from varicose vein in Nepal. Mean age is about 48.9 years on both male and female was female [5]. Varicose veins are caused by increased blood pressure in the veins. The veins can stretch from the increased pressure. This may weaken the walls of the veins and damage the valves each individual may experience symptoms differently. Symptoms may include Color changes in the skin, Sores on the legs, Rash, Sensations in the legs, such as a heavy feeling, burning, and/or aching. Severe varicose veins may eventually produce long-term mild swelling that can result in more serious skin and tissue problems. These include ulcers and non-healing sores. Varicose veins are usually not serious. But complications may happen. They include: Inflammation or swelling of veins (phlebitis) and Blood clot [6]. There are many different treatments available for varicose veins. These treatments vary based upon the size and location of the varicose veins, the presence of symptoms, and in cases of accompanying skin changes (for example, swelling, dermatitis or ulceration) [7].

Varicose vein is most common in women and in people whose occupations require prolonged standing, teachers, traffic police, bus conductors, machine workers, pregnancy, and construction workers. The deep and superficial veins get damaged because of prolonged standing. Once the vein is damaged there is a reversal of blood flow from deep to superficial vein. Among all Traffic Police are more affected by the varicose vein due to work in the outdoor environment with prolonged standing and nature of job. According to one estimate in 2004, 15-20% of population in India is suffering from varicose vein disease [8]. In India, people are quite ignorant of this disease. So, the severity of disease becomes increased. Health education is one of the strategies in the prevention of varicose veins. Keeping the preventive facts in view and the fact that health education has a significant effect on knowledge of traffic police which in turn helps in the prevention of varicose veins. In Bangalore 3-5% of the population suffer venous problems, 10% of population is having varicose veins. Prolonged standing is one of the number one causes of varicose vein in traffic police men. Other causes include hereditary, aging, obesity and injury to the leg (Abraham, 2007). Varicose veins are common in persons, whose occupation forces them for prolonged standing, for long number of

hours while executing their work. In present study 76% patients are affected by prolonged standing [9].

Additionally, a study of 1012 Northern Indian population shows that 46.7% of females and 27.8% of males were found to be having varicose veins whereas 49.3% of females and 18.9% of males were having venous symptoms. Skin trophic changes were observed in 18.9% females and 5.2% of males respectively. High prevalence of chronic venous disorders of the lower limbs was observed in residents of studied region [10]. In a recent health check-up conducted by the Delhi Police it has been found that around 30 per cent of Traffic Police personnel, who are doing their best in providing a safe environment on the roads of the city, are suffering from a disease caused due to standing for long hours [11]. Those above previous study shows that varicose vein was increasing in traffic police day by day but they have known any sufficient knowledge about varicose vein and its prevention and management. Varicose veins have become a serious threat to lives of millions of people across the globe and is said to be ignored by people living in Nepal. Through there is high prevalence of varicose vein in Nepal cause the most of the people of Nepal were house wife, framers, teachers, and traffic police. Among all occupation traffic police are the highest people that have chance of varicose vein. Many traffic police are suffering from it, but most tend to ignore it and that is not good as it can lead to complication in the advanced stage that is why there is urgent need to provide education or knowledge about varicose vein to the traffic police (Guragain M, 2019).

Likewise, a cross section study was conducted on Bangalore, India, among 36 white field traffic police and the result show that 4 persons (11.1%) had varicose vein. In conclusion, Traffic police showed a high prevalence of various health ailments. The study was used to increase group's awareness towards preventive measures [12]. A Korean study showed among 414 nurses working at university hospital, between March and August 2014, From the survey analysis and test results, the prevalence of VVs in nurses was estimated to be 16.18%. Significant factors for venous reflux were age, pregnancy and delivery, the statistical significance of these factors was verified after risk adjustment for sociodemographic factors [13]. Another, cross sectional study conducted from February 2015 to March 2015 GMCH and Associated Hospital in Udaipur, Rajasthan among 364 nurses Among all participated result show that 88 (24.17%) had lower limb VV. The female nurses had slightly higher prevalence compared with their male counterpart 24.50% The oc-

cupational risk factors responsible for lower limb VV among nurses were longer work history 40.42% longer working hours >8 hours 38.70%, and prolonged orthostasis (standing longer - 57.14%) beside patients' bed. They are older in age 28.30% and also having a family history of VV 38.70% [14].

A cross section study conduct on Poland among 40,095 Police and the result present that out of total study population female was 84%. The mean age was 44.8 years. 10% presented with edema, 34.3% had varicose veins, with approximately the same proportion in males and females and 1.5% presented with past or active ulceration Obesity, the number of pregnancies and a positive family history were found to be risk factors for CVI. Female gender was not shown to be a risk factor for varicose veins [15].

A cross section epidemiological study was conducted at 4 locations:Tarentaise, Grenoble, Nyons, and Toulon of French. The result show in contrast, sex-related differences were found: varicose veins were found in 50.5% of women versus 30.1% of men. trophic skin changes were found in 2.8% of women versus 5.4% of men and venous symptoms were found in 51.3% of women 51.3% versus 20.4% of men. Main risk factors for varicose veins were age and family history in both sexes, and pregnancy in women. Varicose veins, age, and pitting edema were the most significant risk factors for trophic skin changes. The risk factors for venous symptoms were female sex, varicose veins, and prolonged sitting or standing [16].

A study conducted on July 2013 to September 2015 at the teaching Medical College, Hospital and Research Centre of Pune, India. And result shows that, 70% patients were males and 30% patients were females having varicose vein. Maximum patients were in age group of 45 - 54 years. 60% patients had involvement of great saphenous vein (GSV), 17% patients had short saphenous vein (SSV) while 23% patients had involvement of both GSV and SSV. In Conclusion Not only prolonged standing but also sitting posture can cause varicose veins. Obesity and increasing age are other risk factors [17].

A cross section study conducted on Shahroud, north of Iran in 2012, among 197 employed hairdressers, and result shows that prevalence of varicose veins was 47.7%. which were significantly associated with age, family history of varicose disease, blood pressure, and duration of standing [18].

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 and the result shows that out of 100 security guards, majority 70% had the average knowledge, 27% had poor knowledge and only 3% had good knowledge [19].

A study was conducted on Shimane Japan on 2012 with 113 men and 205 women aged  $\geq 45$  years. And the result show that Varicose vein were found in 20.1% of the subjects (12.4% of men and 24.4% of women). The previously known risk factors of prolonged upright standing posture during work, higher body mass index (BMI), female sex, and age were also significant factors for VV. There was a significant combined effect of overweight (BMI  $\geq 25$ ) and prolonged upright standing posture at working conclusion, results confirm that exposure to both prolonged standing at work and overweight exacerbate VV development [20].

A study was conducted on Uttar Pradesh of India at the tertiary care center with 1012 people and the result shows that the 46.7% of females and 27.8% of males were found to be having varicose veins whereas 49.3% of females and 18.9% of males were having venous symptoms. Skin trophic changes were observed in 18.9% females and 5.2% of males respectively. History of varicose veins in first-degree relatives and age were significant important risk factors for varicose veins in both sexes. Age history of thromboembolic disease and pitting edema were three significant important risk factors for skin trophic changes among subjects with varicose veins. High prevalence of chronic venous disorders of the lower limbs was observed in residents of studied region [21].

A Descriptive survey approach with non-experimental descriptive survey was conducted on Yenepaya university in India with population of the study was staff nurses.Among all many of the subjects (61%) were having good knowledge regarding varicose vein, followed by 26% having average knowledge, and 10% were having very good knowledge. The mean percentage of overall level of knowledge was 59.64% [22].

A prospective study was conducted in institution of India from May 2007 to April 2009. During this period 62 cases of varicose veins of lower limbs were admitted in hospital of which 50 cases

were selected and were studied in detail. Out of 50 cases studied, 21 (42%) had only long saphenous vein involvement, 7 (14%) had short saphenous vein involvement and in 5 (10%) cases both short and long saphenous system were involved. In addition to long saphenous vein involvement, incompetent perforators were present in 17 (34%) cases. Among them prominent veins and pain were the main complain in 38 (78%) patients. Itching and pigmentation were present in 4 (8%) patients. Ankle edema was present in 6 (12%) patients. Pain and ulceration of lower leg were present in 2 (4%) patients. After clinical assessment appropriate surgical procedures were followed for each of patients. These cases were followed for 3-year durations. Out of 50 patients 7 (14%) patients had recurrence of varicose vein. 7 (14%) patient complained of recurrence of pain after 2 years of surgery but no appearance of varicose vein. One patient (2%) complained of persistence of pigmentation after surgery. 2 (4%) patients complained of persistence of ankle edema and there was complete healing of ulcer which was present earlier [23].

A prospective study was carried out in India, Kadapa, between July 2013 to June 2015. During this period 50 cases of varicose veins of lower limbs were admitted in hospital. Out of 50 cases studied, 35 (50%) had long saphenous vein involvement, 6 (12%) had short saphenous vein involvement and in 5 (10%) cases both short and long saphenous system were involved. In addition to long saphenous vein involvement, incompetent perforators were present in 4 (8%) cases. Among them prominent veins and pain were the main complaints in 36 (72%) patients. Itching and pigmentation were present in 7 (14%) patients. Ankle edema was present in 4 (8%) patients. Pain and ulceration of lower leg were present in 3 (6%) patients. After clinical assessment appropriate surgical procedures were followed for each of patients [24].

Thus, above mentioned facts shows a varicose vein is existing globally. The similarly situation is in Nepalese traffic police too but not taking consideration properly. By this reason we conducted this study to show the result in Nepalese traffic police.

## Research Methodology

### Research design

A quantitative approach of descriptive cross-sectional study design was used to assess the knowledge regarding prevention of varicose vein among traffic police. The overall goal of the study was to assess the knowledge regarding prevention of varicose vein among

traffic police in Kathmandu, Nepal where study was conducted on Thankot, check post, Kathmandu.

The study has descriptive research design. Purposive sampling technique was used to select the sample. Self-administered structured questionnaire was used for the assessing knowledge.

The questionnaire was covered two parts:

- Part I- Socio-demographic information. It was general information of the traffic police.
- Part II- Questions were covered a broad knowledge regarding on prevention of varicose vein (It is below mentioned).

And in this second part it was expected to know some of these below knowledge either they know or not: There are many preventive methods for varicose vein like: 1- Exercise regularly: Try to walk 10 to 20 minutes every day or participate in other exercise, such as bicycling or jogging, swimming to strengthen leg muscles and improve blood circulation. Before beginning an exercise programmed, check with your doctor, especially if you have health conditions such as heart disease, high blood pressure, arthritis, or breathing difficulties. 2- Legs Exercise: When you are sitting down, rotate your feet at the ankles in both directions, making small circles. Extend your legs, and point and flex your feet. Repeat for a minute or two once an hour. 3- High-impact exercises: Such as running may be uncomfortable for people with varicose veins. 4- Avoid long periods of standing or sitting: If you must stand for a long time, shift your weight from one leg to another every few minutes. Sit down frequently and elevate your legs. Bounce up and down on the tips of the toes several times an hour. Take a walk if you can. Some people use small stool to prop up first one foot, then the other when standing at work. If you must sit for long periods of time, stand up and move around or take a short walk. Every 30 minutes to let the legs pump blood back to the heart. Stop for a brief walk every 30-45 minutes during long car trips. 5- Regularly elevating legs: Elevating the legs helps keep the blood from pooling in the lower legs and improves blood flow to the rest of the body. Keep the legs elevated when you sit or lie down, use a foot rest at work and a foot stool at home to elevate the feet. Lie down and raise the legs above the heart level at the end of the day. Try lying on the back on a bed with feet propped on the wall or on pillows to improve blood flow back to the heart. 6- Avoid crossing legs: Try not crossing the legs at the knees when sitting. If you can't prop

up the feet, set them flat on the floor or cross them at the ankles. Crossing legs at the knees squeezes veins and blocks blood flow.7- Wearing compression stockings: Compression stockings help relieve symptoms and slow the progress of varicose veins. Compression stockings are elastic stockings that squeeze veins and prevent blood from flowing backwards. Put the stockings on before getting out of the bed every morning and wear all the day. 8 and9- Avoid tight clothing: Clothing that restricts blood flow in the waist, groin or legs increases the risk of developing varicose veins. 10- Avoid wearing high-heeled shoes: They can restrict ankle movement and thereby affect the pumping mechanism of the large veins in the feet and calves. High-heeled shoes make use of the muscles of buttocks, rather than calf muscles to walk. Low-heeled or athletic shoes help strengthen the calf muscles and improve circulation.11- Eat a low salt, high fiber diet food: Eating fiber reduces the chance of constipation which can contribute to varicose veins. Eating too much salt can retain water or swell [25].

**Study population and setting**

The study was conducted in Metro Traffic Police Office, this station is located at Ramshah path, Kathmandu. Total 1048 staff were working in this police station. Population: The study was conducted with 76 traffic police out of total 1048.

**Sampling**

**Sampling technique**

Non-probability convenience sampling technique was used for selecting sample of the study. Respondents were selected from every of Kathmandu.

**Sample size**

$$\text{Sample size}(n) = \frac{z^2 \times p \times q}{d^2}$$

Where, z = 1.96, p = 0.60 (59.64%) [22] d = 0.1 [26]

Here,

$$= \frac{(1.96)^2 \times 0.60(1-0.60)}{(0.1)^2}$$

$$= \frac{3.8416 \times 0.60 \times 0.40}{0.01}$$

= 90.1

Therefore, research conducting size was 90 people.

Inclusion criteria were as following: Both male and female included. Only interested participate was included. Traffic police who are present in the station at the time of the study. Similarly, the exclusion criteria was traffic police but who were not interested to read and write. Those who were not willing to participate as respondents.

**Techniques of data collection**

For this study semi-structured interview questionnaire was used. Tools was collected by using semi-structured questionnaire

based on objective of research was contain two part. Part I: Questionnaire related to socio-demographic information. And Part II: Questionnaire related to knowledge regarding prevention of varicose vein. There are 20 multiple questions related to knowledge regarding prevention of varicose vein. No negative marking is done for incorrect answer.

**Validity and reliability of the instrument**

**Validity**

Content validity of the tool was being establish by obtaining the suggestion from expert in related field. Review with the research advisors, literature review, colleagues. Modification and minor correction were done improve the clarity and content of items according to suggestion given by validator. The questionnaire was in English and was translated in Nepali language also and given to the supervisor, consultant, adviser, and teacher for checking. Validity and reliability of tool was maintained. Permission from the concerned authority was obtained and the pre testing was conducted.

**Reliability**

Reliability was maintained through pretesting instrument in 10% of study population in Metropolitan [Traffic Police circle Thankot, check post, Kathmandu, Lalitpur and necessary modification in the instrument will be done accordingly.

**Data collection procedure**

The approval letter was taken from Innovative College of Health Science. After proposal presentation and final submission and final proposal. Pre-testing of questionnaire was done. Permission letter for conducting research was taken from Metro Politian Traffic Police Circle, Thankot, check post, Kathmandu. Structured questionnaire was developed for tool with the guidance of researcher guide, expertise extensive and review of literature. Any respondents who are not interested or withdraw in between data collection were not included. Duration for data collection 2 weeks. Each questionnaire was administered in about 20 minutes. Respondents were explained as well as given clear and complete information about how to fill the questionnaire properly. The respondents were selected with inclusion and exclusion criteria and then verbal informed as written informed consents was obtained from each respondent prior to data collection by explaining the purpose of the study. The interview was conducted on the basis of questionnaire to certain no of traffic police and were request to complete questionnaire and request to complete questionnaire and research was collected accordingly.

**Data analysis procedure**

After completion of data collection, data will be checked for their completion and accuracy. After that were tabulated, categorized according to research objectives and analyzed using statistical method SPSS 16 version and MS Excel version 10. Data analysis will be done into two phases. Descriptive analysis, mean, frequen-

cy, percentage will be used for describing the collected data.

This chapter deals with the analysis and interpretation of the data obtained from the interview technique which includes demographic information and knowledge regarding traffic police the result was analyzed by using Statistical Package for Social Science (SPSS- version 20), from which frequency, percentage, mean and standard deviation were calculated. Analysed data are presented in tabulation.

Total number of the respondent was 90. The findings of the study were presented into 2 major parts. Part I: Demographic Information Part II: Knowledge regarding prevention of varicose vein among traffic police in tables.

**Ethical consideration**

Ethical approval was maintained by innovative collage of health science. During the period, all ethical considerations will be maintained and precaution were taken to provide safety and rights of all participants. Formal permission was taken concerned authority by submitting a college letter. Purpose and objectives of the study was explained and verbal consent was taken for each respondent. No discrimination was made according to sex, cast and religion. Human dignity was maintained. Environment was made comfortable, free from any kind of biasness and pressure. Confidentiality and privacy were maintained properly. The information provided by respondents will be only use purpose of study.

**Results**

**Part I**

**Demographic information and analysis and interpretation**

Table 1 demographic information of respondent reals that majority of respondents are male 64% and minority were female 35%. Similarly, head constable was in higher 52% and 22% were sub inspector. More respondent 81.1% are working more than 10 hours.24.2% have education of educational level and just 1.1% have got bachelor and more level education. Most of the respondent from 64.4% were from hilly region, 33.3% from Terai and 2.2% from Himalayas.

	N = 90	
Variable	Frequency	Percentage
<b>Age</b>		
Male	58	64.4
Female	32	35.6
<b>Working post</b>		
Head constable	47	52.2
Sub inspector	20	22.2
Assistant Sub inspector	18	20.2
Other	5	5.5
<b>Working hours</b>		
6 hours	1	1.1
8 hours	10	11.1
10 hours	6	6.7
More than 10 hours	72	81.1
<b>Education level</b>		
Primary level	22	24.2
Secondary level	32	35.6
Higher secondary level	35	38.9
Bachelor level and more	1	1.1
<b>Geographic area</b>		
Terai	30	33.3
Hilly	58	64.4
Mountain	2	2.2

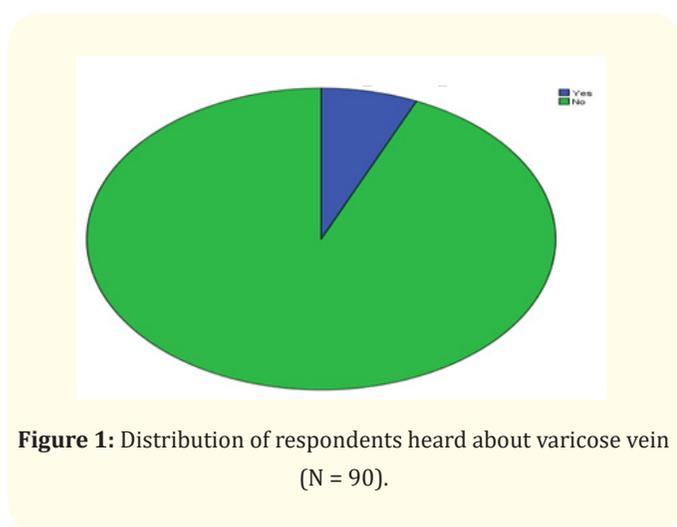
**Table 1:** Demographic information of respondents.

**Part II: Knowledge regarding prevention of varicose vein**

Above figure show that majority 93.3% respondents had not heard about varicose vein. Only 6.7% respondent heard about varicose vein.

Table 2 shows that 4.4% participant have high knowledge about varicose vein whereas 84.4% have poor knowledge about varicose vein and 6.7% of respondent have moderate knowledge about varicose vein. Similarly, minority 22.22% of respondent have high knowledge about that vein which varicose vein actually effect whereas 76.67% had poor knowledge. 20% respondent said that overweight people are effect by varicose vein and 3.3% of respondent said that athletics are effect by varicose vein. Among 90 respondents 12% of respondent had high knowledge that why varicose vein actually occurs. Majority of respondent i.e. 90% had high level knowledge about which part varicose vein mostly seen.

Table 3 reveals that majority 80% of respondent have poor knowledge about risk factor of varicose vein and similarly minority of respondent i.e. 13.3% had high level of knowledge and majority



**Figure 1:** Distribution of respondents heard about varicose vein (N = 90).

Respondents	N = 90	
Variable	Frequency	Percentage
<b>What is mean by varicose vein</b>		
Formation of blood clot in superficial vein	4	4.4
Inflammation of vein	76	84.4
Accumulation of degeneration material of atrial wall	4	4.4
Vein that large, raised, swollen blood vessels that twist and turn	6	6.7
<b>In which vein varicose vein effect</b>		
Femoral	20	22.2
Popliteal	69	76.7
Jugular	1	1.1
Saphenous	0	0
<b>Type of people are more effect by varicose vein</b>		
Overweight people	57	20.0
Athletics people	29	3.3
Diabetic people	4	12.2
Hypertensive people	0	13.3
<b>Why varicose vein occurs</b>		
Due to large diameter of vein	69	76.7
Due to small diameter of vein	6	6.7
Due to valve do no work and blood clot in leg	11	12.2
Due to high blood pressure	4	4.4
<b>Part varicose vein mostly seen</b>		
Leg and thigh	81	90.0
Abdomen	4	4.4
Hands	3	3.3
Face	2	2.2

Table 2: Distribution of respondents regarding varicose vein.

Variable	N = 90	
Variable	Frequency	Percentage
<b>Risk factors of varicose vein</b>		
Thin	7	7.8
Prolong standing	7	7.8
Pain	4	4.4
Weight gain	72	80
<b>Person that effect more by varicose vein</b>		
Person who work less than other	12	13.3
Person who do not exercise	11	12.2
Person who lift heavy weight	55	61.1
Person who work for long time	12	13.3

Table 3: Distribution of the respondent’s knowledge regarding risk factors of varicose vein.

of respondent 61.1% have poor knowledge about the person that have risk of varicose vein.

Table 4 reveals that 75.6% respondent have high knowledge about cause of varicose vein. Similarly, 28.9% of respondent had high knowledge and 32.3% had poor knowledge about the early symptoms of varicose vein. Majority of respondent 60% had poor knowledge about part of body varicose vein mainly affects. 20.2% had high knowledge about site that varicose vein effect. Among

Variable	N = 90	
Variable	Frequency	Percentage
<b>Cause of varicose vein</b>		
Trauma on leg	18	20.0
Head injury	3	3.3
Prolong standing	68	75.6
Crossing leg	1	1.1
<b>Early symptoms of varicose vein</b>		
Bluish	22	24.2
Redness present in leg	13	14.4
Small vein swelling	29	32.2
pain on leg while prolong standing	26	28.9
<b>Part of the body that varicose vein mainly effects</b>		
Deltoid leg vein	17	.9
Deltoid leg muscle	17	18.9
Leg artery	54	60
Leg nerves	2	2.2
<b>Symptoms of varicose vein</b>		
Heavy legs	18	20.0
Ankle Swelling	65	72.2
Pain	6	6.7
Ascites	1	1.1

Table 4: Distribution of respondent’s knowledge regarding the cause, symptoms of varicose vein.

90 respondents 72.2% have had poor knowledge and 26.7% have moderate knowledge and 1.1% had poor knowledge about symptoms of varicose vein.

Table 5 show that 20% respondent had high knowledge and 44.44% respondent have moderate knowledge about how to prevent varicose vein pain. 32.3% had high knowledge and 17.7% have poor knowledge about the prevention of varicose vein. Similarly, 32.2% have high knowledge and 6.7% have poor knowledge about the prevention of varicose vein from worse. Half population i.e. 56.7% respondent had poor knowledge on prevention of

	N = 90	
Variable	Frequency	Percentage
<b>Prevention of varicose vein pain</b>		
Don't move the leg more	40	44.4
Elevated the leg above the heart level	18	20.0
Short exercise to stretch the calf muscle	26	28.9
Ignore the pain	6	6.7
<b>Prevention of varicose vein</b>		
Taking periodical test	41	45.6
Elevates the leg	16	17.8
Oil message	4	4.4
All of the above	29	32.2
<b>Prevention varicose vein from worse</b>		
Use stocking	16	17.8
Avoid Prolong standing	39	43.3
Elevated the leg	6	6.7
All of the above	29	32.2
<b>Prevention of varicose vein</b>		
Elevated the leg	25	27.8
Use stocking	10	11.1
Exercise	51	56.7
Avoid fatty food	4	4.4
<b>Advantage of stocking</b>		
Helps to improve blood circulation	25	27.8
To improve high blood pressure	25	27.8
To prevent leg swelling	23	25.6
To decrease the risk of blood clot	17	18.9

**Table 5:** Distribution of respondent regarding prevention of varicose vein.

varicose vein whereas minority i.e.11.1% had high knowledge on prevention of varicose vein. Regarding the advantage of stocking 25.6% respondent had poor level of knowledge.

Table 6 shows that minority 17.8% of respondent have in high knowledge and 73.3% had poor knowledge about varicose vein treatment. 13.3% responded answered spontaneous bleeding whereas majority answered loss of moment have about complica-

Variable	Frequency	Percentage
<b>Treatment of varicose vein</b>		
Chemotherapy	66	73.3
Sclerotherapy	16	17.8
Angiography	3	3.3
Laparoscopy	5	5.6
<b>Complication of varicose vein if we do not do treatment</b>		
Stiffening or hardening of leg tissue	33	36.7
Spontaneous bleeding	12	13.3
Deep vein thrombosis	7	7.8
Loss of movement	38	42.2
<b>Complication of varicose vein</b>		
Leg ulcer	53	58.8
Thrombophlebitis	26	28.9
Pulmonary embolism	3	3.3
paralysis	8	8.9
<b>If you have varicose vein</b>		
Consult doctors	71	78.9
Take pain killer	9	10.0
Leg elevation banding the swelling site	2	2.2
	8	8.9

**Table 6:** Distribution of respondents regarding treatment and complication of varicose vein.

tion of varicose vein if treatment is not done. Majority of respondent i.e. 58.8% had poor knowledge about complication of varicose vein. Majority i.e. 78.9% respondent answered to consult doctor if

Knowledge level	Frequency	Percentage
High	21	23.3
Moderate	28	31.1
Poor	41	45.6

**Table 7:** Knowledge scoring of the respondents.

they have varicose vein.

Table 7 regarding knowledge of varicose vein of traffic police, 23.3% had high knowledge, 31.1% had moderate knowledge, 45.6% of respondent had in high knowledge of varicose vein.

## Discussion

Finding related to demographic information reveals that majority of respondents are male 64% and minority were female 35%. Similarly, head constable was in higher 52% and 22% were sub-inspector. More respondent 81.1% are working more than 10 hours. 24.2% have education of educational level and just 1.1% have got bachelor and more level education. Most of the respondent from 64.4% were from hilly region, 33.3% from Terai and 2.2% from Himalayas. Majority 93.3% respondents had not heard about varicose vein.

Only 6.7% respondent heard about varicose vein. 4.4% participant have high knowledge about varicose vein whereas 84.4% have poor knowledge about varicose vein and 6.7% of respondent have moderate knowledge about varicose vein. Similarly, minority 22.22% of respondent have high knowledge about that vein which varicose vein actually effect whereas 76.67% had poor knowledge. 20% respondent said that overweight people are effect by varicose vein and 3.3% of respondent said that athletics are effect by varicose vein. Among 90 respondents 12% of respondent had high knowledge that why varicose vein actually occurs. Majority of respondent i.e. 90% had high level knowledge about which part varicose vein mostly seen.

Majority 80% of respondent have poor knowledge about risk factor of varicose vein and similarly minority of respondent i.e. 13.3% had high level of knowledge and majority of respondent 61.1% have poor knowledge about the person that have risk of varicose vein. 75.6% respondent have high knowledge about cause of varicose vein. Similarly, 28.9% of respondent had high knowledge and 32.3% had poor knowledge about the early symptoms of varicose vein. Majority of respondent 60% had poor knowledge about part of body varicose vein mainly affects. 20.2% had high knowledge about site that varicose vein effect. Among 90 respondents 72.2% have had poor knowledge and 26.7% have moderate knowledge and 1.1% had poor knowledge about symptoms of varicose vein. 20% respondent had high knowledge and 44.44% respondent have moderate knowledge about how to prevent varicose vein pain. 32.3% had high knowledge and 17.7% have poor knowledge about the prevention of varicose vein.

Similarly, 32.2% have high knowledge and 6.7% have poor knowledge about the prevention of varicose vein from worse. Half population i.e. 56.7% respondent had poor knowledge on prevention of varicose vein whereas minority i.e. 11.1% had high knowl-

edge on prevention of varicose vein. Regarding the advantage of stocking 25.6% respondent had poor level of knowledge.

Minority 17.8% of respondent have in high knowledge and 73.3% had poor knowledge about varicose vein treatment. 13.3% responded answered spontaneous bleeding whereas majority answered loss of moment have about complication of varicose vein if treatment is not done. Majority of respondent i.e. 58.8% had poor knowledge about complication of varicose vein. Majority i.e. 78.9% respondent answered to consult doctor if they have varicose vein. Regarding knowledge of varicose vein of traffic police, 23% had high knowledge, 31.1% had moderate knowledge, 45.5% of respondent had in high knowledge of varicose vein.

## Conclusion

Varicose vein is the one of the cases of morbidity now, days in Nepal. Many of people have no more idea about varicose vein, its cause, prevention and management. Due to lack of knowledge, negligence, geographical situation, prolong job duty hours' prevalence the varicose vein rate higher.

On the basis of the finding of the study it is concluded majority of the people 45.5% had poor knowledge on varicose vein. 23% of people had high knowledge about the meaning, risk factors, causes, sign/symptom and treatment 31.1% of people have moderate knowledge about varicose vein. In the context of Nepal, people are quite ignorant of this issue. So, the severity of disease becomes increased. Health education is one of the strategies in the prevention of varicose veins. Keeping the preventive facts in view and the fact that health education has a significant effect on knowledge of traffic police which in turn helps in the prevention of varicose veins. A growing number of traffic police are suffering from varicose veins, a painful ailment which often develops due to high pressure while standing and walking. The only way to avoid the varicose vein among traffic police is to follows the preventive measures.

The research studies reports created an insight that there is more prevalence of varicose vein among traffic police. If knowledge should be provided, for traffic police they can prevent varicose vein and prevent from its complication. Hence there is need to assess knowledge of varicose vein its sign and symptoms, prevention and aware them about its management. This study is aimed to help in ensure the knowledge about the prevention of varicose vein among traffic police.

This research will be helpful to assess the knowledge regard-

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