

Original Research Article

Study on the Prevalence Rate of Varicose Veins among School Teachers

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ABSTRACT

Background: The teachers are the biggest asset of the society as they are the source of knowledge and teaches about morals to the children. They face many problems which mainly affect their quality of life. One of the problem is varicose veins which shows various symptoms like itching and ulceration.

Aim: The aim of the study is to find the prevalence rate of varicose veins among school teachers.

Objective: To determine the prevalence rate of varicose veins among school teachers using VEINES-symptoms questionnaire. To determine which gender has higher prevalence rate of Varicose veins.

Materials: VEINES (venous insufficiency epidemiological and economic study).

Results: The statistical analysis shows that the 40% of the school teachers were affected by varicose veins by using VEINES-symptoms questionnaire.

Conclusion: Based on the present study findings, it was concluded that the school teachers are more prone to Varicose veins. The present study states that female school teachers has higher prevalence rate of Varicose veins than male teachers. Among the school teachers prolonged standing considered as the significant risk factors

KEY WORDS: Varicose veins, School teachers, VEINES-symptoms questionnaire, Prevalence rate, Itching, Ulceration.

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Access this Article online	Journal Information
Quick Response code  DOI: 10.16965/ijpr.2022.110	International Journal of Physiotherapy and Research ISSN (E) 2321-1822 ISSN (P) 2321-8975 https://www.ijmhr.org/ijpr.html DOI-Prefix: https://dx.doi.org/10.16965/ijpr 
	Article Information
	Received: 18 February 2022 Accepted: 20 March 2022 Peer Review: 23 February 2022 Published (O): 11 October 2022 Revised: 10 March 2022 Published (P): 11 October 2022

INTRODUCTION

Tortuous, dilated and elongated veins in the lower limbs are called varicose veins (VV) [1]. According to physiology, The reverse flow of blood through the faulty valves is only permitted by varicose veins [2].

Varicose veins are considered as an iceberg

phenomenon because usually the patients present themselves to doctors only after severe complication not in the initial stage of VV [3]. The teachers are the biggest asset of the society as they are the source of knowledge and teaches about morals to the children. They face many problems which

mainly affect their quality of life and lower limbs. One of the problem is varicose veins which is a chronic condition and will shows various symptoms like itching and ulceration. It is $\geq 3\text{mm}$ in diameter which is measured in demonstrable reflux. The cause of the varicose veins are not clearly known and It is not understood completely even though it is a common condition affecting all ages (from teenagers to old age people). This is because it is asymptomatic and they complaints of tingling, hurting and cramps [4-7].

There are many risk factors which may increase the chances of varicose veins they are: gender, ageing, obesity, hereditary, pregnancy, prolonged standing, history of leg injury or deep vein thrombosis (DVT) [6].

Prolonged standing position may increase the prevalence of VV. Standing is the important occupational risk factors which is common among many profession like teachers, shop workers, bank workers, nurses, traffic policeman, school supervisor, production line workers, warehouse staff, printers, train drivers, museum workers, casino workers, hospitality, engineers, library staff, all reported standing related health problems due to their profession [8,9]. The management options for varicose veins includes: Conservative management, external laser treatment, injection sclerotherapy, endovenous interventions, and surgery. Even though VV are ordinarily benign severe varicosities may lead to hazardous complications including edema, dermatitis, ulceration and unusual severe bleeding which is a life threatening condition. Furthermore, skin changes, such as hyperpigmentation, eczema, lipodermatosclerosis, and atrophie blanche may be occurred [10]. So, the best action is prevention as the varicose veins cannot be cured, some measures can be taken which will help in preventing VV are exercising regularly, eating a high-fiber and low salt diet, maintaining healthy bodyweight, avoiding constipation, avoiding tight clothing that tightens the legs, groin or waist, avoiding high heels and tight hosiery, avoiding long periods of standing and sitting positions by changing the standing and sitting positions regularly and also shifting weight from one leg to other leg

every few minutes while standing for longer periods [11].

Most of the studies on VV concern treatment and therapeutic effects. Studies have explored general risk factors in patients with VVs. There are few studies on occupational risk factors in general population. Most of the studies on VV are related to occupational risk factors deal with working in a standing position [12]. There is a need to educate the teachers about this condition in order to prevent it [13].

METHODS AND PROCEDURE

Study Design And Location: After the university research committee [ISRB] gave approval for the observational study. A sample of 30 have been selected by the convenient sampling technique from 2 private schools. Informed consent were obtained from the subjects and detailed procedure were explained. A self administered questionnaire was given to the school teachers which consists of: name, age, sex, height, weight, marital status, residence, working experience, working hours per days and working hours per week. Then, the BMI was calculated. The (VEINES/Sym) questionnaire consists of 9 questions which are related to side effects of varicose veins. The time considered for Questions identified with indications covers the last four Weeks. The score delivered by (VEINES/Sym) questionnaire incorporates nine things related to VV side effects: Heavy legs, aching legs, swelling, night cramps, heat or burning sensation, restless legs, throbbing, itching, tingling sensation (e.g. pins and needles) [13]. The prevalence rate of Varicose veins among school teachers were calculated by using these questions. Where the teachers who are experiencing 6 or more symptoms every day among these nine things are considered. The inclusion criteria was the school teachers of all age groups, teachers of both the genders, Then those who are working more than 6 hours a day and who are having atleast 2 years of experience. The exclusion criteria was the school teachers who are having any arterial disease, having any previous history of deep vein thrombosis or recent surgeries, The teachers who are having

any deformities, fractures, dislocations or any contractures.

Out Come Measures: VEINES (venous insufficiency epidemiological and economic study).

Statistical Analysis and Results

The Socio Demographic data of the participants were shown in table 1.

The data regarding the features of the participant's profession were shown in Table 2.

Table 1: Sociodemographic data.

S.no	Groups	Age	Height (cms)	Weight (kgs)	BMI
1	School teachers	45.11	157.6	65.7	24

Table 2: Features of the participants profession.

S.no	Groups	Working hours per day	Working hours per week	Working experience (in years)
1	Schoolteachers	9.2	50	10-20

The Socio demographic data shows that the average mean age of school teachers was found to be **45.11**.

The mean average height of the school teachers is found to be **157.6cm**.

The mean average weight of the school teachers is found to be **65.7kg**.

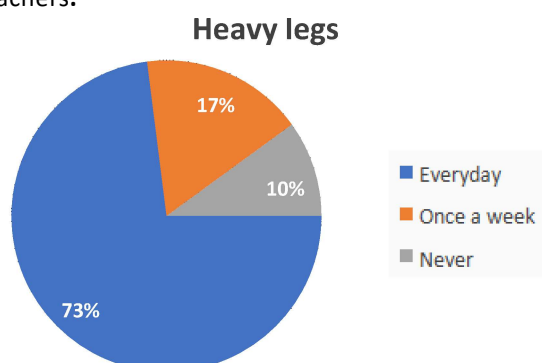
The mean average BMI is found to be **24**.

The data regarding the features of the participant's profession shows the average mean working hours of school teachers per day is **9.2**

The mean average working hours of the school teachers per week is found to be **50**.

The mean average working experience of the school teachers is found to be **10-20 years**.

Pie chart 1: Heavy legs experienced by the school teachers.

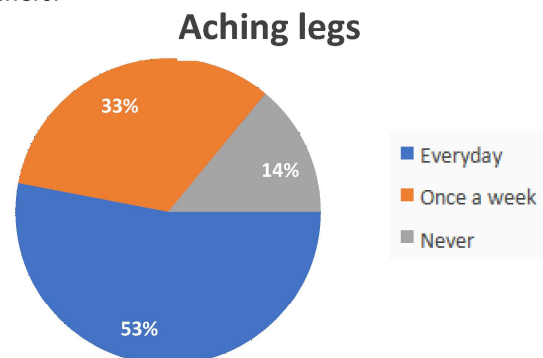


Every day **73%** of the school teachers were experiencing heavy legs.

Once a week **17%** of the school teachers were experiencing heavy legs.

10% of the school teachers have never experienced heavy legs.

Pie chart 2: Aching legs experienced by the school teachers.

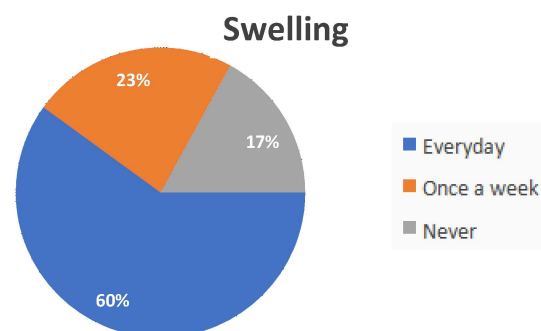


Every day **53%** of the school teachers were experiencing aching legs.

Once a week **33%** of the school teachers were experiencing aching legs.

14% of the school teachers have never experienced aching legs.

Pie chart 3: Swelling experienced by the school teachers.

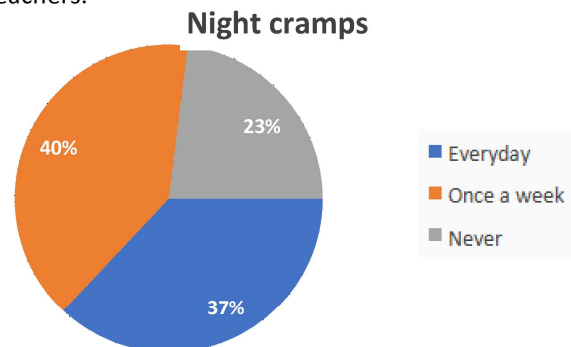


Every day **60%** of the school teachers were experiencing swelling in their legs.

Once a week **23%** of the school teachers were experiencing swelling in their legs

17% of the school teachers have never experienced swelling in their legs.

Pie chart 4: Night cramps experienced by the school teachers.

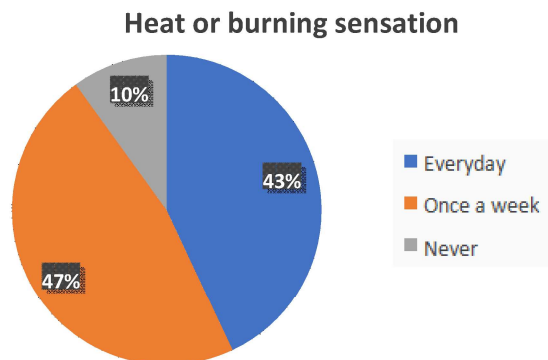


Every day **37%** of the school teachers were experiencing night cramps.

Once a week **40%** of the school teachers were experiencing night cramps.

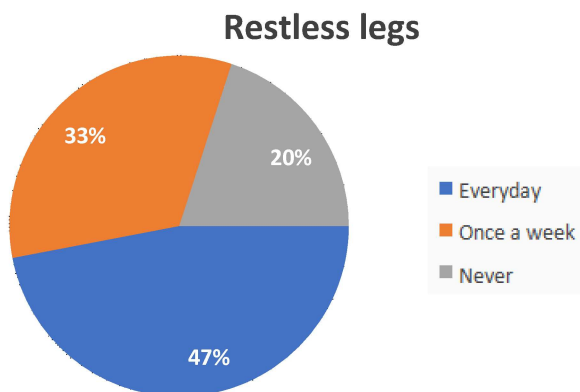
23% of school teachers have never experienced night cramps.

Pie chart 5: Heat or burning sensation experienced by the school teachers.



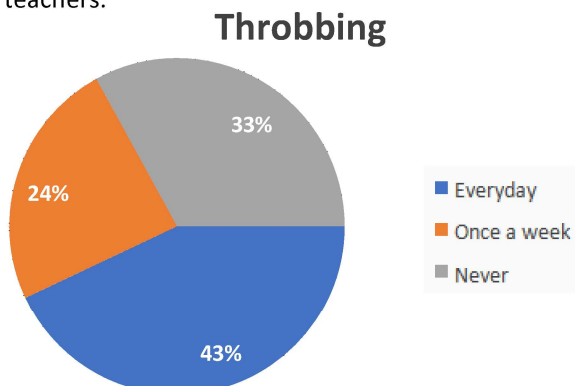
Every day **43%** of the school teachers were experiencing heat or burning sensation in their legs.
Once a week **47%** of the school teachers were experiencing heat or burning sensation in their legs.
10% of the school teachers have never experienced heat or burning sensation in their legs.

Pie chart 6: Restless legs experienced by the school teachers.



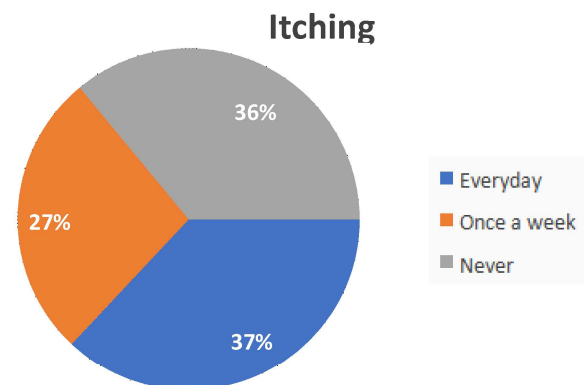
Every day **47%** of the school teachers were experiencing restless legs.
Once a week **33%** of the school teachers were experiencing restless legs.
20% of the school teachers have never experienced restless legs.

Pie chart 7: Throbbing pain experienced by the school teachers.



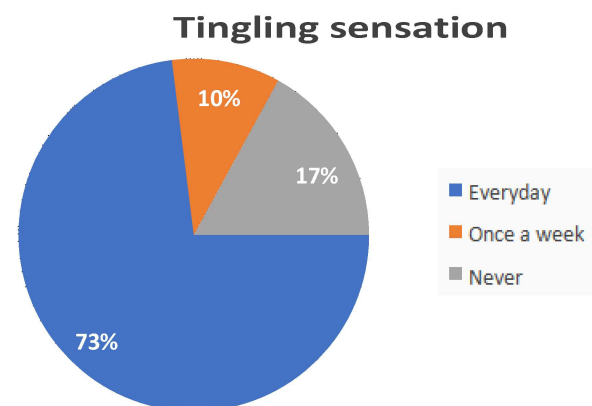
Everyday **43%** of the school teachers were experiencing throbbing pain in their legs.
Once a week **24%** of the school teachers were experiencing throbbing pain in their legs.
33% of the school teachers have never experienced throbbing pain in their legs.

Pie chart 8: Itching experienced by the school teachers.



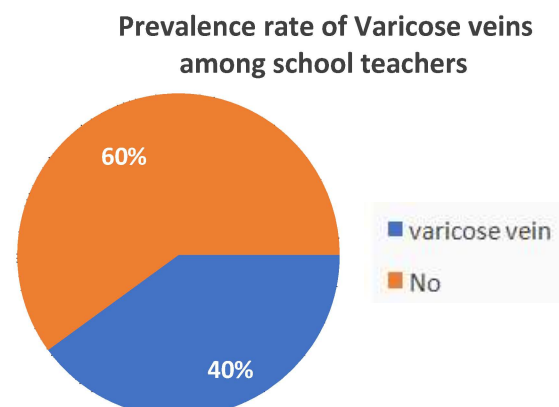
Every day **37%** of the school teachers were experiencing itching in their legs.
Once a week **27%** of the school teachers were experiencing itching in their legs.
36% of the school teachers have never experienced itching in their legs.

Pie chart 9: Tingling sensation experienced by the school teachers.



Every day **73%** of the school teachers were experiencing tingling sensation in their legs.
Once a week **10%** of the school teachers were experiencing tingling sensation in their legs.
17% of the school teachers have never experienced tingling sensation in their legs.

Pie chart 10: Prevalence rate of Varicose veins among school teachers.



40% of the school teachers were affected by varicose veins.
60% of the school teachers were not affected by varicose veins.

DISCUSSION

The varicose veins can adversely influence the lives of the affected people, particularly the expert who ordinarily represent longer periods on their feet like nursing staff, traffic specialist, surgeons and teachers. The findings of this study revealed that mean age of the studied sample was 45.11 ± 9.09 and 41.4% of the participants age ranged from 35- 44 years. These findings are consistent with a study about prevalence [8-15]. As indicated by sex, the current examination represents that the greater part of the contemplated test were females, while not exactly Half of them were males. As per residence, in this examination the greater part of the investigation tests were from urban region where just few are from the rural area. Agreeing working hours out of every day, in excess of three fourth of the examples were laboring for 8 hours and more than 50 hours in a week. The study findings states that half of the study samples were having more than 10 years of experience [16].

This study also demonstrates that prevalence rate of Varicose veins in females was higher than males this may be due risk factors like hormonal factors in women, pregnancy, age, obesity and hereditary factors [17].

Compression stockings, elastic bandages and aerobic activities can improve blood circulation in our body which helps to recover from varicose veins. Waking, cycling, lunges, leg lifts, rocking feet, elevating legs are some of the preventing measures can be taken against varicose veins.

CONCLUSION

Base on the present study findings, it was concluded that the school teachers are more prone to Varicose veins. The present study states that female school teachers has higher prevalence rate of Varicose veins than male teachers. Among the school teachers prolonged standing considered as the significant risk factor.

Conflicts of interest: None

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How to cite this article: K. Kotteeswaran, Pradeep kumar S, Poojasree B. Study on the Prevalence Rate of Varicose Veins among School Teachers. Int J Physiother Res 2022;10(5):4337-4341. DOI: 10.16965/ijpr.2022.110