STUDY ON PREVALENCE AND RISK FACTOR OF VARICOSE VEIN AMONG STAFF NURSES

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ABSTRACT

Health is the level of functional or metabolic efficiency of a living being. Health is deeply related to lifestyle. Ideal health will however, always remains a mirage, because everything in our life is subject to change. Health may be described as a potentiality or the ability of an individual or a social group to modify himself or itself continually in the face of changing conditions of life not only to function better in the present but also to prepare for the future. Moreover today increasing emphasis is placed on health, health promotion, wellness and self-care. Millions of workers spend majority of the working day on their feet and many hours in static positions. Standing uses 20% more energy than sitting and because human bodies are not designed to stand at work, prolonged standing, can lead to tiredness, loss of concentration and increased health risks. These risks include the swelling of feet and legs, feet and joint damage, varicose veins, heart and circulatory disorders, lower back problems and pregnancy complications. Current statistics reveal that nearly 2.7 million people worldwide, suffer from varicosities and the toll is ever increasing. Where India is concerned, experts are witnessing a growing prevalence of varicosities especially among women. Nearly, 20-15 per cent of women and 10-15 per cent of men suffer from varicose veins in India. The extrapolated prevalence rate of varicose vein in India providing warning in about 47,928,177 in statistics. This study includes Non-experimental survey design and Nonprobability purposive sampling technique was been used in order to conduct the study. A total of 100 Nurses were selected by non-probability Purposive sampling method. Data was collected by demographic data objective checklist & structured questionnaire rating scale. Percentage wise distribution of nurses according to their risk of developing varicose vein depicts that majority 39% of the nurses had risk of developing no varicose vein followed by 37 % of them had mild risk of developing varicose vein. Hence it can be interpreted that majority 37% of the nurses had mild risk of developing varicose vein , Chi square values were calculated to find out the association between the prevalence rate and demographic variables of nurses. The findings revealed that there was no significant association between prevalence rate and socio demographic variables like, gender, educational qualification, and years of experience, history of lower limb injury surgery and history of swelling in lower limb. However a significant association was found between the prevalence score and demographic variable age which was ($_y2= 7.036$). The study have helped the researcher in order to identify prevalence and risk of prevalence among staff nurse , and it has also made nurses alert regarding their health status.

KEYWORDS: Assess, Prevalence, Risk factors, Varicose Veins, Staff Nurses

INTRODUCTION

Varicose veins (VV) of the lower limbs is considered as the most common vascular disorders in humans, creating serious signs and symptoms in patients and sometimes leads to surgical treatments and widespread morbidity. Varicose veins are one of the chief preventable diseases which are associated with veins. It is a serious disease, which poses threat of life of patient when effective and efficient measures are not taken. Current statistics reveal that nearly 2.7 million people worldwide, suffer from varicosities and the toll is ever increasing. Where India is concerned, experts are witnessing a growing prevalence of varicosities especially among women. Nearly, 20-15 per cent of women and 10-15 per cent of men suffer from varicose veins in India.[5]It is estimated that varicose veins occur in up to 60% of the adult population in United States with an increased incidence correlated with increased age. The condition is most common in women and in people whose occupation require prolonged standing, such as teachers, salespeople, hairstylist, nurses medical personnel and construction workers.[1]

Akash Ramaswamy, Shibumon M. M (2018). conducted a cross-sectional study involving 225 health-care professionals (nurses and doctors) who were randomly selected. Data was collected using proformas. Positive cases for varicose veins were subjected to clinical examination. Two hundred and twenty-five subjects were included in the study of which 23.6% were doctors and 76.4% nurses. Majority of respondents were females (81.8%).Varicose veins were identified in 34.1% nurses and 9.6% doctors. Complications were noted in 23.4%. Most common symptoms were calf pain(81.3%) and muscle cramps(75%). A history of prolonged standing was present in 96.9% of positive responder and 43.8% had a family history for varicose veins. Bilateral involvement was noted in 45%and unilateral involvement in 55%. Interpretation & conclusions: Based on the current study, 28% of health-care professionals are suffering from Varicose Veins. A higher prevalence is seen among nurses compared to doctors. Complications were noted in one- fourths of them. The study also showed strong relation with prolonged standing, pregnancy and family history. Also, the study showed that majority of positive cases was aware of their condition but did not seek medical attention.[2]

Amir Mohammad (2009) conducted a descriptive study to identify the incidence of Varicose veins in relation to occupation and working hours during January 2009 to April 2010. In this study retrospective cohort design applied, among 58 patients who were diagnosed with varicose veins.70.69% cases involved in mainly standing occupations while only 29.31% patients belonged to mainly sitting occupations. The male female ratio among the varicose vein patients was found to be 4:1.On an average, the patients who got the disease had worked standing or

walking for 9.33 hours/day. The maximum incidence was seen in the age group of 30-39 years with as many as 17 cases out of 58 cases studied. The study concluded that a definite co relation between varicose veins and standing occupations, and taking care of the factors responsible for the disease will go a long way in increasing the productivity and efficiency of workers. People who work more than 9.33 hours per day standing or walking are more likely to develop the disease.3

Hirai M, Naiki K and Nakayama R (1990) conducted a study on the prevalence and risk factors of varicose veins in Japan were investigated in 541 Japanese women. Varicose veins were defined as any dilated, tortuous, and elongated veins of the lower extremity and classified into four types. The total prevalence rate was 45%. Saphenous type was observed in 22%, segment type in 35%, reticular type in 28%, and web type in 16%. Varicose veins in Japan seem to be less common than in the United States and Europe but more prevalent than in Africa. Concerning risk factors for varices, age, sex, heredity, and childbirth were related to the incidence of varicosities, as reported by others. However, these risk factors were shown to differ according to type of varicose veins.4

Ivica Kontosic, et. al.(1991) conducted a conducted a epidemiological study on 530 males and 794 females employed in highly professional activities, data where collected by survey and clinical examination. Varicose veins (VV) prevalence was significantly higher in females than males. VV were diagnosed in 34.6% and 18.9% of males. X2 test revealed that the prevalence of VV was significantly higher in persons who primarily stand than in those who sit in their work place.5

Ann Barnes, et.al. (2014) conducted a study on effectiveness of self instructional module regarding prevention and management of varicose veins, which showed knowledge scores of teachers revealed that majority (71.6%) of teachers had average knowledge on prevention and management of varicose veins, remaining (25%) of teachers had good knowledge on prevention and management of varicose veins and least (3.3%) of teachers had poor knowledge on prevention and management of varicose veins and none of teachers had very good knowledge on prevention and management of varicose veins in pre test. It suggests that the teachers should receive more information regarding prevention and management of varicose veins.6

Sachin Kalpal, et,al. (2023) conducted a study on prevention and management amongst traffic police stations of Hubballi, showed that the overall knowledge scores of traffic police regarding prevention and management of varicose veins were average and the results revealed that there was statistical association between age, educational qualification, total service experience,

source of information, history of varicose veins and knowledge scores, whereas, no association was found between the knowledge scores and other selected socio-demographical variables such as gender, body weight, duty hours per day, position adopted while on duty. 7

Swathy.S,Thenmozhi. M.S. (2015) conducted a study which included a random population in Tamilnadu. The prevalence of varicose veins 52% is significantly high when compared to previous studies in other regions [4-7]. in this study, the prevalence was higher in females than males similar to the previous studies [8-10]. the prevalence of varicose veins was the highest in the age group 30-40 as per this study. other studies also show that youngest cohort had the lowest prevalence of varicose veins[11]8.

Pradnya P Dhuri (2019) in her study evaluates to assess the level of knowledge regarding management of varicose veins among industrial workers at J.K. Files industry, Chiplun. The data was collected and analysed on the basics of objective, assumption, formulated for the study. Overall knowledge categorized as poor (score 4 or below 4 marks), good (score between 5 to 8 marks), and excellent (score between 9 to 12 marks), out of 40 samples 6 industrial workers (15%) had excellent knowledge, 29 industrial workers had (72.5%) had good knowledge, 5 industrial workers (12.5%) had poor knowledge.9

Akoijam Sangita Devi, et, al (2014) conducted a regarding various types of measures, in prevention of varicose veins which included a complete history of patient and physical examination including vascular assessment. Identification of high risk patient and teaching about prevention of varicose veins. Early identification and treatment of patient with varicose veins. Teaching about varies management of varicose veins. Providing information regarding complication of untreated varicose veins and its management. Thus, it concludes that the prevention of varicose veins begins by knowing the risk factors and working on ones that can be controlled (such as obesity and prolonged standing). Improving circulation and muscle tone, especially in the lower legs, will also help in preventing varicose veins.10

OBJECTIVES

1. To identify prevalence rate of varicose vein among staff nurses working in selected hospital of South Gujarat.
2. To assess risk factors of varicose vein among staff nurses working in selected hospital of South Gujarat.
3. To find out the association between prevalence rate and risk factors of varicose vein with selected demographic variables.

ASSUMPTIONS

The study is based on the following assumptions:-

- The prevalence rate of varicose will be higher among staff nurses working in selected hospital of south Gujarat.

- The contributing factors of varicose vein will be as per demographic variables. E.g. Age, years of experience, working hours in a day, family history of varicose vein, history of swelling in lower limb, BMI, etc.

METHODS & MATERIALS

Research approach: Quantitative Approach

Research design: Survey Non Experimental Design.

Setting of the study: the selected Hospitals of south Gujarat

Population: staff nurses who are working in selected Hospitals of South Gujarat.

Sample size: 100 staff nurses

Sampling Technique: Non- probability Purposive sampling technique

CRITERIA FOR SAMPLE SELECTION

Criteria for sample selection were based on cost, practical concern, design and the people's ability to participate in the study. The study had two criteria namely inclusion and exclusion criteria.

INCLUSION CRITERIA

The criteria, or standards, set out before a study or review. Inclusion criteria are used to determine whether a person can participate in a research study or whether an individual study can be include in a systematic review. Inclusion criteria help identify suitable participants. Samples who are:

- Staff who are nurses by profession of selected hospitals.
- Between age of 18 years and above
- Who can read and write English.

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EXCLUSION CRITERIA

The criteria, or standards, set out before a study or review. Exclusion criteria are used to determine whether a person should participate in a research study or whether an individual study should be excluded in a systematic review. Exclusion criteria help identify suitable participants.

• Who are not willing to participate in study.

• Who will not be present on duty at the time of data collection.

• Who can't read and write English.

DESCRIPTION OF TOOL

In this study,

Section 1: Demographic Data

It consists of selected demographic variable like Age, Education, Sex, Years of Experience, Marital Status, Working hours in a day, Family history of varicose vein, History of swelling in lower limbs, Family planning measures followed, Dietary pattern, BMI.

Section 2: Objective Check list of Prevalence

It has total 10 questions for prevalence rate of varicose veins among staff nurses of selected hospitals.The checklist consists of yes and no type, where samples have to tick in front of either yes or no.

Section 3: Structured Questionnaire Rating Scale

It consists of 5 point Likert Scale, where sample has to select one of the ordered responses.

For every response there is score, never will get 1, rarely 2, Sometimes 3, Most of the times 4, Always 5.

RESULTS

SECTION:I

It consists of selected demographic variable like Age, Education, Sex, Years of Experience, Marital Status, Working hours in a day, Family history of varicose vein, History of swelling in lower limbs, Family planning measures followed, Dietary pattern, BMI.

SECTION: II

Table No. 2 Percentage wise distributions of nurses according to the prevalence rate of varicose vein among staff nurses.

SECTION III

Table no.3 Assessment of the risk factors of varicose vein among staff nurses working in selected hospital of south Gujarat by using structured questionnaire rating Scale.

SECTION IV

To find out the association between risk prevalence rate with selected demographic variables.

Table no.4 Association between prevalence rate of varicose vein with selected demographic variables.

DISCUSSION

THE MAJOR FINDINGS OF THE STUDY

1) Demographic distribution of the subjects:

A. Age: In the findings the age shows that higher percentage ((32%) were in age group 20-30 years and 42 % of them were in the age group 30 to 40 years. Hence it can be interpreted that most of the nurses were in the age group of 30-40 years.

B. Gender: In the findings the gender Percentage wise distribution of staff nurses according to their gender depicts that i.e. (19%) staff were male and also (81%) were female.

C. Education: In the findings the education (qualification) shows that higher percentage (40%) were G.N.M. and 30% of them had qualification of B Sc. Nursing. Hence it can be interpreted that most of the nurses were G.N.M.

D. Experience: In the findings the experience shows depicts that higher percentage (39%) had 0-2 years of experience. 26 % had 4-6 years of experience. It interprets that the maximum nurses had 0-2 years of experience.

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E. Marital Status: In the findings the marital status shows that higher percentage (69%) of the nurses was married and 16% of them were unmarried. It interprets that the maximum nurses were married.

F. Working Hours in a Day: In the findings the working hours in a day (timing of work) status shows that majority majority 52% had work hours for 6 hours/ day followed by 31% had working hours 8 Hours/ day. It interprets that nurses doe's work as per the labour law.

G. Family History: In the findings the family history status shows that most 88% of them did not had family history and remaining 12% had family history. It interprets that the majority of the samples under study did not have family history of varicose vein.

H. History of lower limb injury Surgery: In the findings the history of lower limb injury surgery status shows 91% of them did not have history of lower limb injury surgery and remaining 9% had history of lower limb injury surgery. It interprets that the majority of the samples under study did not have history of lower limb injury surgery.

I. History of swelling in lower limb: In the findings the history of swelling in lower limb status shows that 90% of them did not have history of swelling in lower limb and remaining 10% had history of swelling in lower limb .

J. Family planning measures followed: In the findings the family planning measures followed (42%) of the nurses used barrier method as a measures of family planning followed by (37%) of them had use oral contraceptive pills as a measure of family planning. Hence it can be interpreted that the majority of the samples under study had use oral contraceptive pills as a measure of family planning.

K. Dietary Pattern: In the findings the dietary pattern shows that majority percentage 45% were vegetarian followed by 30% were consumes mixed diet. Hence it can be interpreted that the majority of the samples under study were vegetarian.

L. BMI: In the findings the BMI shows that 35% of the nurses had BMI in between 18.5 to 24.9 followed by 28 % of them had BMI less than 18.5, Hence it can be interpreted that the majority of the samples had higher BMI than normal.

Identification of Prevalence Rate

Percentage wise distribution of nurses according to their prevalence depicts that 06 percent out of total sample was having severe varicose vein followed by 59% (45 +19) mild to moderate varicose and 30 % of them had no risk of developing varicose vein. Hence it can be interpreted that majority 70% of the nurses had prevalence of developing varicose vein.

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Risk factor Assessment

Percentage wise distribution of nurses according to their risk of developing varicose vein depicts that majority 39% of the nurses had risk of developing no varicose vein followed by 37 % of them had mild risk of developing varicose vein. Hence it can be interpreted that majority 37% of the nurses had mild risk of developing varicose vein.

Analysis of data related to comparison of prevalence rates with selected demographic variables Chi square values were calculated to find out the association between the prevalence rate and demographic variables of nurses. The findings revealed that there was no significant association between prevalence rate and socio demographic variables like, gender, educational qualification, and years of experience, history of lower limb injury surgery and history of swelling in lower limb. However a significant association was found between the prevalence score and demographic variable age which was ($\gamma 2 = 7.036$).

CONCLUSION

The findings indicated that, the study conducted to identify prevalence and risk factor of varicose vein among staff nurses in selective hospital of south Gujarat. This study by using the checklist and structured questionnaire significantly brought out the prevalence rate and risk factors of varicose veins among staff nurses. Analysis of the data showed that there was significant years of experience as nurses explore to occupation which is increasing of developing varicose vein.

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CONFLICT OF INTEREST

The Author declares no conflict of interest in the study.

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