

A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge Regarding Deep Vein Thrombosis and its Prevention among Orthopedic Clients Admitted at HSK Hospital and Research Centre Bagalkot

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Abstract:-

Background: Conceptual frame work act as a building block for research study. The over all purpose of frame work for scientific finding meaning full and generalized. It provides a certain frame work for reference for clinical practice, education and research. Frame work can guide the researchers under taking of not only “what” of natural phenomenon but also “why” of their occurrence. They also give directions for relevant questions to practical problems.¹

Aims: To assess the knowledge of orthopaedic clients regarding deep vein thrombosis and its prevention. To evaluate the effectiveness of planned teaching programme on knowledge regarding deep vein thrombosis and its prevention among orthopedic clients. To determine the association between pre test and post test knowledge scores with selected socio demographic variables of orthopedic patients.

Materials and Methods: Study approach- This was an evaluative study and follow the examination plan as pre-exploratory, for example one gathering pre-test and post-test without control group. The population associated with this investigation was orthopedic client at HSK Hospital and Research Center at Bagalkot. Tests are orthopedic clients at HSK Hospital and Research center at Bagalkot. Test size is 30 (Total) orthopedic clients were remembered for the investigation

Results: The assessment of pre test knowledge of the orthopedic patients reveals that majority 63.33% of patients had average knowledge. The pre test mean percentage of knowledge score was 40.05% with mean and SD 13.34 ± 2 were as in the post test mean percentage of knowledge score was 71.85% with mean and SD 22.72 ± 2.02 which reveals effectiveness of PTP.

Conclusion: A significant difference was found between the pre-test and post-test knowledge scores of the orthopedic clients. The study proved that PTP was effective in improving the knowledge of orthopedic clients.

Keywords:- Effectiveness, Planned Teaching Program, Knowledge, Socio-Demographic Variables, Orthopedic Clients.

I. INTRODUCTION

Deep vein thrombosis has the longest recorded history. The oldest known description of this condition is found in Ebers papyruses, which have been dated to approximately 1500BC. The deep vein thrombosis are enlarged; twisted, painful deep veins resulted from poorly functioning valves. As the condition first described the mechanism of deep vein thrombosis formation of blood in deep venous system through the perforating veins¹.

Deep vein thrombus are very common in the age group of 30 to 70 years, more common in women and in those persons whose job requires prolonged standing.

The Deep vein thrombus in most people remain as simply a cosmetic concern, do not cause Any discomfort, but unfortunately for others deep veins thrombus veins can cause significant discomfort and are often a sign of more serious problem kinesis, a word of Greek origin means motion or to move. The human body is designed for physical activity and movement. Even at rest, the normal healthy adult changes position on average every 11.6 minutes during sleep; this physiological requirement for movement is termed the minimal physiologic mobility requirements².

Before the 1940s, strict bed rest was the rule for two weeks after childbirth, three weeks after herniorrhaphy, and four weeks or more after myocardial infarction. The shortages of hospital beds and personnel during World War II led to the surprise discovery that early mobilization of the sick and injured actually improved results and lessened complications³.

More recent researches by the National Aeronautics and Space Administration (NASA) produced additional evidence for the damaging effects of prolonged inactivity and immobility.

Like muscle, bone is living tissue that responds to exercise by becoming stronger. Those who exercise regularly generally have greater bone mass (bone density and strength) than those who do not. Although weight-bearing activities contribute to the development and maintenance of bone mass, weightlessness and immobility can result in bone loss⁴.

Some people can't perform weight-bearing activity. They include, for example, people who are on prolonged bed rest because of surgery, serious illness, or complications of pregnancy; and those who are experiencing immobilization of some part of the body because of stroke, fracture, spinal cord injury, or other chronic conditions. These people often experience a significant bone loss and are at high risk for developing complications live deep vein thrombosis, constipation, osteoporosis, etc. It is suggested that there is a good chance to fully recover the lost bone if the immobilization period is limited to 5 to 8 weeks⁵.

II. NEED FOR STUDY

Deep leg veins are the larger veins that go through the muscles of the calf and thighs. Venous thrombi are IV deposits composed of cellular materials. They are not the veins that we can see just below the skin .A calf vein is the common site for a deep vein thrombosis. A thigh vein is less commonly affected. Rarely, other deep veins in the body can be blocked by blood clots. When a person has deep vein thrombosis, the blood flow in the vein is partially or completely blocked. An important complication of deep vein thrombosis is the dislodgement of the clot from the deep vein, which will travel along the circulation and reaches the pulmonary vasculature and causing pulmonary embolism¹⁰.

➤ Aims

The aims of the study are as follows:

- To assess the knowledge of orthopaedic clients regarding deep vein thrombosis and its prevention.
- To evaluate the effectiveness of planned teaching programme on knowledge regarding deep vein thrombosis and its prevention among orthopedic clients
- To determine the association between pre test and post test knowledge scores with there selected socio demographic variables of orthopedic patients.

III. MATERIALS AND METHODS

The present study was conducted on a evaluative research approach and pre-experimental one group pre-test without control group design. The target population is the orthopedic clients at various hospitals of Bagalkot. Accessible population is orthopedic clients at HSK hospital and research centre Bagalkot was selected by a convenient sampling technique and 30 orthopedic clients were selected. The data were collected by structured closed ended knowledge questionnaire. Data analysis and interpretation were performed using descriptive such as frequency distribution. Mean, median, percentage, and inferential statistics such as Chi-square.

IV. RESULTS

➤ Part I (SECTION-I): Description of socio-demographic characteristics of sample.

The percentage wise distribution of sample according to socio demographic variables age in years, gender, religion, educational status, marital states, family monthly income, area of residence, source of information, occupation, were as follows.

Percentage wise distribution of orthopedic clients according to their age shows that 33.33% are the age of 50 above, 26.67% are in the age group of 31-40, 23.33% are in the age group of 41-50 and 16.67% are in the age group of less than 30 years. Percentage wise distribution of orthopedic clients according to their gender shows that 63.33% are male and 36.67% are female. Percentage wise distribution of orthopedic clients according to their religion shows that 60% belongs to Hindu religion 20% belongs to Muslim religion 10% are Christians and 10% are others. Percentage wise distribution of orthopedic clients according to their educational status shows that 36.67% are primary educated , 26.67% are no formal educated , 23.33% are high school educators and 6.67% are PUC and degree educated. Percentage wise distribution of staff nurses according to their age in years shows that majority (44%) of the staff nurses were in age group of 22-28 years old, 30 percent of them were in the age group of 29-35 years old, and 14 percent of staff nurses aged between 41-50 years. Least of staff nurses were in the age group of 51-60 years old 12 percent.

➤ *Part II(Section-II): Assessment of knowledge of patients regarding deep vein thrombosis and its prevention.*

Table 1 Percentage wise distribution of study subjects according to levels of knowledge in pretest. N=30

Test	Levels of knowledge	Number(f)	Percentage (%)
Pre test	Very good	00	00%
	Good	00	00%
	Average	19	63.33%
	Poor	11	36.67%
	Very poor	00	00%

Percentage distribution of study subjects in pre-test reveals that out of 30 subjects 2 (6.67%) had average knowledge followed by 19 (63.33%) subjects with poor knowledge and 11 (36.67%) with very poor knowledge regarding prevention of complications of Immobilization. (Table 1).

Table 2: Percentage wise distribution of study subjects according to levels of knowledge in post test. N=30

Test	Levels of knowledge	Number(f)	Percentage (%)
Post test	Very good	05	16.67%
	Good	25	83.33%
	Average	00	00%
	Poor	00	00%
	Very poor	00	00%

➤ *Part-II: Area wise effectiveness of PTP on knowledge regarding prevention of complications of immobilization.*

Table 3 Area wise mean, S.D and mean percentage of the knowledge scores in pretest and post test. N=30

Knowledge area	Max. score	Pre-test (O ₁)		Post-test (O ₂)		Effectiveness (O ₂ -O ₁)	
		Mean ± SD	Mean %	Mean ± SD	Mean %	Mean ± SD	Mean %
Knowledge regarding meaning, concept, signs and symptoms	14	5.67 ± 1.1	40.05	10.06 ± 1.05	71.85	4.39 ± 0.05	31.35%
Knowledge regarding management and prevention	16	7.67 ± 0.9	47.93	12.66 ± 0.97	79.12	4.99 ± 0.07	31.18%
Total	30	13.34 ± 2	87.98	22.72 ± 2.02	150.97	9.38 ± 0.12	62.53

Area wise comparison of mean and standard deviation of the knowledge scores of the pre test and post test reveals an increase in the mean knowledge score of the patients after PTP.

In the area of knowledge on “Related to meaning, concept, signs and symptoms” pre-test mean knowledge score was 5.67 with SD ±1.1 which was 40.5% of total score, where as post-test mean knowledge score was 10.06 with SD ±1.05 which was 71.85% of total score. The effectiveness of PTP on related to meaning, concept, and signs and symptoms mean score was 4.39 with SD ±0.05 which is 31.35% of total score.

Percentage distribution of study subjects in post-test reveals that out of 30 subjects 5 (16.67%) had very good knowledge, followed by 25 (83.33%) subjects with good knowledge, and (00%) with very poor knowledge regarding prevention of complications of Immobilization. (Table 5.2).

➤ *Part-III(Section III): Assessment of the effectiveness of the PTP on knowledge regarding deep vein thrombosis and its prevention.*

➤ *Part-I: Comparison of knowledge level of orthopedic clients in pre-test and post-test.*

• *Assessment of knowledge level of patients in pre-test and post test*

Knowledge wise comparison of study subjects in pre test and post test reveals the following results. In pre-test, out of 30 subjects 63.33% had average knowledge followed by 36.67% subjects with poor knowledge and 00% with very poor knowledge regarding prevention of complications of deep vein thrombosis. However after PTP in post test, 16.67% subject with very good, 83.33% subjects with good, 00% with average and 00% subjects with poor knowledge regarding deep vein thrombosis and its prevention.

In the area of knowledge “Related to management and prevention”, pre-test mean knowledge score was 7.67 with SD ±0.9 which is 47.93% where as post-test mean knowledge score was 12.66 with SD ±0.97 which is 79.2%. The effectiveness of PTP on management and prevention, mean score was 4.99 with SD ±0.07 which is 31.18% of total score.

The overall findings reveal that the post-test mean knowledge score 22.72 with SD ±2.02 which is 150.97% of total score was more when compared to the pre-test mean knowledge score 13.34 with SD ±2 which is 87.98% of total score. The overall effectiveness of PTP on deep vein thrombosis and its prevention, mean score was 9.38 with SD ±0.12 which is 62.53% of total score. Hence it indicates that the PTP was effective in enhancing the knowledge of patients on deep vein thrombosis and its prevention.

➤ *Part-III: Testing of Hypothesis:*

To evaluate the effectiveness of planned teaching programme, a research hypothesis was formulated.

- H1:- There is significant differences between pretest and post test knowledge scores of the orthopedic clients regarding deep vein thrombosis and its prevention.

Table 4:Significant difference between the pretest knowledge and post test knowledge scores of Patients.

Test	Mean	Std. Error	Mean Diff	SD Diff	Paired t-value	Table value
Pre-test (x ₁)	13.33	0.62	9.4	0.18	14.63	1.96
Post-test(x ₂)	22.73					

As the calculated t value (14.63) was much higher than table ‘t’ value (1.96) the hypothesis: H₁-there is a significant difference between the pre test knowledge and post test knowledge scores of the patients on deep vein thrombosis and its prevention is accepted. Findings revealing the presence of significant difference between pre-test and post-test knowledge scores, hence the PTP on deep vein thrombosis and its prevention which is prepared by the researcher was proved to be effective.

➤ *Part IV(Section IV): Association between post test knowledge scores and selected socio demographic variables*

Table 5: Association between post test knowledge scores and selected socio demographic variables

SL. NO	Socio demographic variables	D f	Chi-square value	Table value	Level of significance	Significant
1	Age	1	0.43	1.96	1.4	Not significant
2	Gender	1	0.45	1.96	1.4	Not significant
3	Religion	1	9.37	1.96	1.4	Not significant
4	Education	1	0.11	1.96	1.4	Not significant
5	Marital status	1	1.44	1.96	1.4	Not significant
6	Income	1	4.12	1.96	1.4	Not significant
7	Residency	1	12.28	1.96	1.4	Not significant
8	Source of information	1	2.71	1.96	1.4	Not significant
9	Occupation	1	0.03	1.96	1.4	Not significant

As the calculated values were lesser than table value (1.96) at the degree of freedom 1, the hypothesis H₂ is rejected. So, there is no significant association between post -test knowledge scores and socio demographic variables of relatives such as age, gender, type of family, education, occupation, family, education, occupation, income, marital status, religion and source of knowledge regarding deep vein thrombosis and its prevention. Findings revealing that, no extraneous variables have affected on the knowledge scores and hence the planned teaching programme is improved the knowledge regarding deep vein thrombosis and its prevention.

*= <0.05(significant)

V. CONCLUSION

A significant difference was found between the pre-test and post-test knowledge scores of the orthopedic clients. The study proved that PTP was effective in improving the knowledge of orthopedic clients in HSK hospital, Bagalkot.

RECOMMENDATIONS

Keeping in view the findings of the present study, the following recommendation were made:

- A similar study can be replicated on a large sample to generalize the findings.
- A similar study can be conducted by including additional demographic variables.

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