



A Pre-Experimental Study To Assess The Effectiveness Of Information Booklet On Knowledge Regarding Venous Thrombo-Embolic And Its Management Among Staff Nurses At Selected Hospital, Indore (M.P.)”

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Abstract: The aim of the study was to assess the effectiveness of an information booklet on knowledge regarding venous thromboembolism (VTE) and its management among staff nurses at a selected hospital in Indore, Madhya Pradesh. A quantitative pre-experimental one-group pre-test post-test design was adopted, involving 60 staff nurses selected through non-probability purposive sampling. Data were collected using a structured knowledge questionnaire administered before and after the distribution of an information booklet. The mean pre-test knowledge score was 10.3, which increased to 19.37 in the post-test, indicating a statistically significant improvement. The findings demonstrate that the information booklet was effective in enhancing the knowledge of staff nurses regarding VTE and its management. Therefore, structured educational tools like information booklets can be valuable in improving clinical awareness and nursing practices.

Keywords: Effectiveness, venous thromboembolism, staff nurses, knowledge, information booklet, nursing education.

Introduction

Background

The thromboembolism was general among post-operative cases, because clients were very serious ill, with immobilization & bed-bidden. In this case the blood that not returns to the right side of the heart and improves venous stasis. The clients are risk for compromised circulation. Regular ambulation is advised for the hemodynamic ally stable patient. Once stable most clients are assisted to come out of bed and help to walk to restore the circulatory pump. If client is risk for VTE, low-dose heparin or enoxaparin, oral warfarin, inter commitment compressions stockings are used. Identified that as 67,354 cases was definite and 35,123 probable cases of VTE, Deep Vein Thromboembolism and PE were 1.22, 0.78 (95%) and 0.45(95% 0.44-0.45) per 1000 person. One year case fatality rates after definite or probable VTE were 10.6% and 23.0%. Thromboembolism is quiet executioner, which kills a bigger number of individuals than bosom disease, AIDS, prostate malignancy & street accidents consolidated. Consistently more than 4 million clients overall are

influenced by Thromboembolism. According to Centres for Disease Control (CDC), the precise number of people affected by DVT/PE is 3,00,000 to 6,00,000(1-10 per 1000). The incidence of thromboembolism in India as reported is one percent of the adult population after age of fifty and is 15% to 20% in hospitalized patient“ its and in 100 who developed thromboembolism can develop PE which can be fatal. In Kerala, prevalence of thrombo-embolism is 88.5% of critically ill clients belonged to high-risk group according to the risk assessment model. High-risk group composed of medical & surgical conditions especially immobile clients & clients after orthopaedic, cardiac, gastro & neuro surgery.

Need of study

VTE can happen after significant general medical-procedure. PE is perceived as most widely recognized recognizable reason for death in hospitalized clients in US. The danger of (DVT) & PE is higher in colorectal surgeries contrasted & general surgeries. Frequency of VTE in this populace is assessed to be 0.2 to 0.3%. Avoidance of VTE is viewed as client-security measure in most commanded quality drives. The actions for avoidance of VTE incorporate mechanical techniques (irregular pneumatic pressure gadgets & graduated pressure stocking) & pharmacologic specialists. A mix of mechanical & pharmacologic techniques delivers best outcomes. Clients going through medical-procedure ought to be separated by their danger of VTE dependent on understanding danger factors, illness related danger variables, & system related danger factors. The sort of prophylaxis ought to be equivalent with danger of VTE dependent on composite danger profile. Risk-assessment is another key component for thromboprophylaxis. Albeit not all clients who are conceded to emergency clinic will require prophylaxis for VTE, numerous clients in the medium to high-chance classes are right now not being recognized and, along these lines, are being presented to superfluous danger of VTE. By identifying those clients most at risk, preventative measures can be used to reduce VTE incidence. The leaders of VTE, which offers support freedom to give certified idea, is chief expert limit of endorsed escorts. In any case, definitive treatment of VTE is coordinated by well-informed authorities, there is an obvious game plan that clinical orderlies have responsibility concerning crucial assumption. This inconvenient subject has been unequivocally analysed by experts. Several evaluations have conveyed that clinical expert expect critical part in thrombo-prophylaxis through tireless examination, data gathering, hazard stratification, and by giving suggestions, and execution.

Objectives

1. To assess pre-test knowledge of staff nurses regarding venous thrombo-embolism and its management.
2. To evaluate effectiveness of information booklet on knowledge regarding venous thrombo-embolism and its management among staff nurses.
3. To assess post-test knowledge of staff nurses regarding venous thrombo-embolism and its management.
4. To compare pre-test & post-test knowledge of staff nurses regarding venous thrombo-embolism and its management.

5. To find out association between post-test knowledge of staff nurses regarding venous thrombo-embolism and its management with their selected socio-demographic variables.

Hypothesis:

At the significance level of 0.05

- H_{01} – There is no significant difference between mean pre-test & post-test knowledge score regarding VTE and its management among staff nurses at selected hospital, Indore.
- H_{A1} – There is a significant difference between mean pre-test & post-test knowledge score regarding VTE and its management among staff nurses at selected hospital, Indore
- H_{02} – There is no significant association between post-test knowledge of staff nurses regarding VTE and its management with their selected socio-demographic variables
- H_{A2} – There is significant association between post-test knowledge of staff nurses regarding VTE and its management with their selected socio-demographic variables.

Methodology: A quantitative evaluative research approach with a pre-experimental one-group pre-test post-test design was adopted to assess the effectiveness of an information booklet on knowledge regarding venous thrombo-embolism (VTE) and its management among staff nurses. The study was conducted at Mohak Hi-Tech & Super-speciality Hospital, Indore (M.P.) and included a total of 60 staff nurses selected using non-probability purposive sampling technique. Staff nurses aged between 21 to 34 years, able to read and write in English, and available during the period of data collection were included in the study. A structured and validated knowledge questionnaire was developed and used as the tool for data collection. The pre-test was conducted to assess the baseline knowledge of participants regarding VTE and its management. This was followed by the distribution of the information booklet as the intervention tool. After a period of seven days, a post-test was conducted using the same questionnaire to assess the effectiveness of the information booklet. The collected data were organized and analyzed using both descriptive and inferential statistics. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to describe the demographic variables and knowledge scores. Inferential statistical tests, including paired 't'-test, were applied to determine the significant difference between pre-test and post-test scores. Additionally, chi-square test was used to assess the association between post-test knowledge scores and selected socio-demographic variables. A significance level of $p < 0.05$ was considered statistically significant throughout the analysis.

Data Analysis and Interpretation

This analysis is divided as follows: -

SECTION I:-Frequency and percentage distribution of staff nurses according to socio-demographic variables.

SECTION II:-Effectiveness of information booklet on knowledge regarding VTE and its management among staff nurses.

SECTION III:-Compare between pre-test and post-test level of knowledge score regarding venous thromboembolism and its management.

SECTION IV:- Association between the post-test knowledge scores with the chosen demographic variables**SECTION I:-**Frequency and percentage distribution of staff nurses according to socio-demographic variables.

Demographic variable	Frequency (N)	Percent (%)
Age of Staff nurses		
25-30 years	34	56.67
31-35 years	14	23.33
36-40 year	6	10
41-45 year	6	10
Gender of staff nurses		
Female	40	66.66
Male	20	33.34
Educational qualification of Staff nurses		
Diploma Nursing	35	36.66
Bachelor of Science in Nursing	13	48.33
Post-Basic Bachelor of Science in Nursing	11	8.33
Master of Science in Nursing	1	6.66
Area of Working		
COVID-19 Care unit	39	65
Medical Ward	13	21.66
Surgical Ward	4	6.67
Intensive care unit	4	6.67
Clinical Experience of Staff Nurses		
1-2 Year	39	65
3-4 Year	13	21.66
5-6 Year	4	6.67
7 Year	4	6.67
Any previous knowledge of staff nurses		
Yes	40	66.66
No	20	33.34

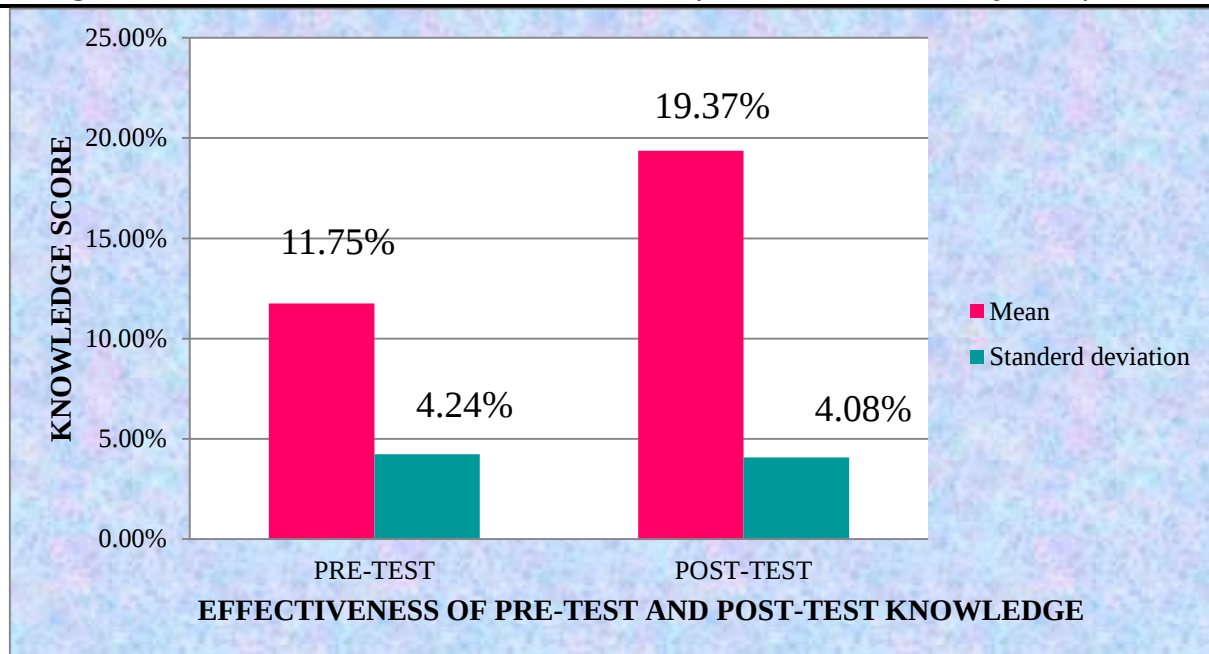
- ❖ Analysis reported that among 60 staff nurses, 34 (56.67%) are in age of 25-30 year, 14 (23.33%) are in 31-35 years, whereas 6 (10%) are in 36-40 years and 41-45 years each.
- ❖ Shows that among 60 staff nurses, 40 (66.66%) are in female staff whereas only 20 (33.34%), are male staff nurses..
- ❖ Findings reveal that among 60 staff nurses, 35 (58.34%) are diploma Nursing holder, 13 (21.66%) are graduate in Nursing, 11 (18.34%) are P.B.B.Sc.in Nursing, whereas only 1(1.66%) is Master Degree in nursing.

- ❖ Shows that among 60 staff nurses, 39 (65%), have 1-2 clinical experiences, 13 (21.66%) have 3-4 years, whereas only 4 (6.67%) have 5-6 and above 7 years each.
- ❖ Shows that among 60 staff nurses, 40 (66.66%) have Previous Knowledge Regarding VTE and its management whereas only 20 (33.34%), are not having any Previous Knowledge Regarding VTE and its management.
- ❖ Shows that among 60 staff nurses, 26 (43.34%) have Nursing professionals as their source of information, 19 (31.66%) got information from Journals, 8 (13.34%) from Friends & 7(11.66%) mothers have information from Media.

SECTION II:-Effectiveness of information booklet on knowledge regarding VTE and its management among staff nurses.

S. No	Grade	Mean	Mean difference	SD	"t" Value	Significance
1.	Pre test	11.75	7.62	4.24	10.18	t= 10.18 P<0.05 most significant at 117 degree of freedom P=117
2.	Post test	19.37		4.08		

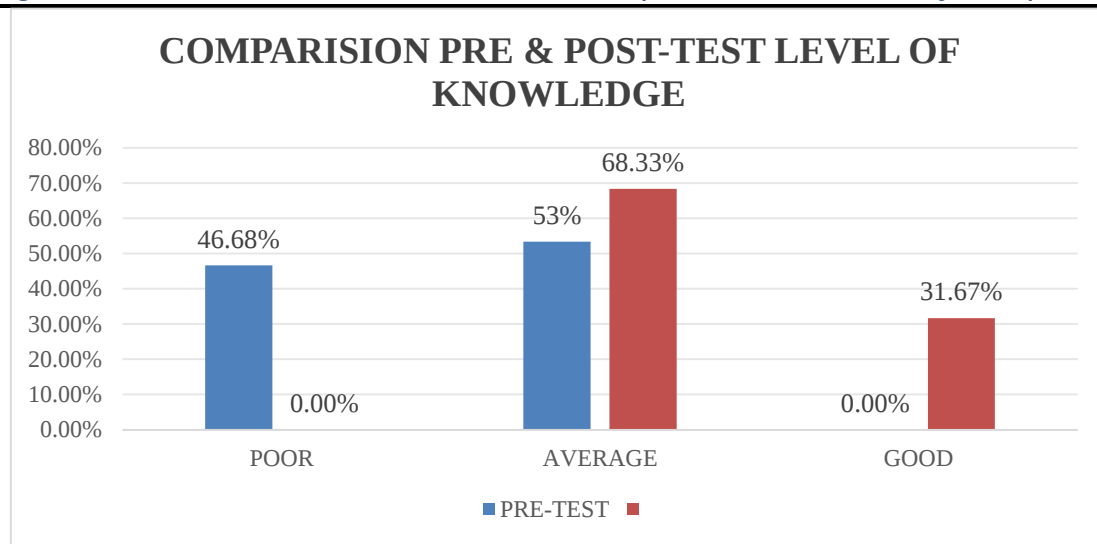
The analyse data that the mean knowledge score of pre-test is 11.75, the mean knowledge score of post-test is 19.37, mean pre and post-test difference 7.62, with standard deviation of pre-test 4.24, standard deviation of post-test 4.08 and calculated value 117 more than tabulated "t" value 11.18 at 0.05 level of significance. Hence significance of difference is found between knowledge score in pre-test and post-test among Staff nurses in selected hospital of Indore (M.P.) regarding venous thromboembolism and its management. It means that there is most significant effectiveness of Information Booklet on knowledge venous thromboembolism and its management among staff nurses in selected hospital of Indore (M.P.)



SECTION III:-Compare between pre-test and post-test level of knowledge score regarding venous thromboembolism and its management.

S. No.	Score	Grading	Pre-test		Post-test	
			Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
01.	0-10	Poor	28	46.67	0	0
02.	11-20	Average	32	53.33	41	68.33
03.	21-30	Good	0	0	19	31.67
Total			60	100	60	100

The finding reveal represents that pre-test (before providing of information booklet), 28(46.67%) staff nurses have Poor knowledge score (0-10), majority of staff nurses 32(53.33%) have average knowledge score (11-20) whereas only 0 (0%) have good knowledge score (21 -30) and in Post-test (after providing of information booklet), 0 (0%) staff nurses have Poor knowledge score (0-10) ,majority of staff nurses 41 (68.33%) have average knowledge score (11-20) and staff nurses 19(31.67%) have good knowledge score(21 -30).



Depicts that the comparison mean, mean difference, SD and t-value between pre-test & post-test knowledge score among staff nurse. The calculated pre-test mean knowledge score was 13.90 and the SD was (SD±5.55) whereas post-test mean knowledge score was obtained 21.12 and the SD was (SD±4.96). The calculated mean percentage indicates and clarifies knowledge sharing in terms of pre-test & post-test for each sample. The mean percentage for pre-test was 39.70% and post-test was 60.30% that explore that after completion of study (pre-test & post-test) total knowledge of individual considered at 100% in which 39.70% was existing knowledge before study and average gain in knowledge after intervention was 60.30%.

The computed 't' value 16.7365(2.00, P<0.05 df; 59) shows that there is a significant difference between pre-test knowledge and post-test knowledge. This indicates that chosen information booklet is highly effective to increase knowledge of staff nurses regarding risk factor assessment of severe COVID-19 illness.

Section- C: Association between pre-test knowledge of staff nurses with their selected socio-demographic variables.

- ❖ Result shows that association of demographic variable, age of staff nurses with Post-test knowledge score. The calculated chi-square value obtained is 34.86 which is higher than tabulated value at, P value 12.59, which is statistically most significant.
- ❖ Shows association of demographic variable, Gender of staff nurses with Post-test knowledge score. The chi-square value obtained is 5.4 which are higher than tabulated value, p value 5.99, which is statistically significant.
- ❖ Shows association of demographic variable, qualification of staff nurses with Post-test knowledge score. The chi-square value obtained is 40.92 which is higher than tabulated value, p value 12.59, which is statistically most significant.
- ❖ Shows association of demographic variable, Area of working of staff nurses with Post-test knowledge score. The chi-square value obtained is 54.78 which is higher than tabulated value, p value 12.59, which is statistically significant.

- ❖ Shows association of demographic variable, Clinical experiences of staff nurses with Post-test knowledge score. The chi-square value obtained is 54.78 which is higher than tabulated value, p value 12.59, which is statistically significant.
- ❖ Shows association of demographic variable, any training program attended of staff nurses with Post-test knowledge score. The chi-square value obtained is 5.4 which are higher than tabulated value, p value 5.99, which is statistically significant.
- ❖ The above table shows association of demographic variable, Source of Information of staff nurses with knowledge score. The calculated chi-square value obtained is 16.66 which is higher than tabulated value at, P value 12.59, which is statistically significant.

The socio demographic variables Age, Gender, Educational Qualification, Area of working, Clinical experience, and any training program attended regarding Prevention of VTE and its management is found significantly associated with their Post-test knowledge score.

Hence research hypothesis H_{A2} Significant Association between post-test knowledge regarding Prevention of VTE and its management with their chosen socio- demographic variables is accepted.

Result: The present study assessed the effectiveness of an information booklet on knowledge regarding venous thromboembolism (VTE) among 60 staff nurses in a selected hospital at Indore. In the pre-test phase, most staff nurses had limited awareness. Specifically, 46.67% had poor knowledge, while 53.33% had average knowledge. None demonstrated good knowledge before the intervention. The mean pre-test knowledge score was 10.3 with a standard deviation of 4.98, highlighting a significant knowledge gap among staff nurses regarding VTE and its management. This emphasized the urgent need for educational tools such as an information booklet. After the intervention, the post-test results showed clear improvement. About 68.33% of staff nurses moved to the average knowledge category, and 31.67% attained good knowledge. Importantly, no staff nurse remained in the poor knowledge category. The post-test mean knowledge score increased significantly to 19.37 with a standard deviation of 3.88. This improvement confirmed the positive effect of the information booklet on staff nurses' understanding of VTE. The mean difference between pre-test and post-test scores was 7.62. The calculated t-value was 118.18, which was much higher than the tabulated value of 10.18 at the 0.05 significance level. This shows that the knowledge gain was statistically significant. In conclusion, the information booklet was found to be highly effective. It significantly improved the knowledge of staff nurses regarding VTE and its management. The study supports the use of structured teaching materials in enhancing clinical knowledge among healthcare professionals.

Conclusion: Present study concluded that majority of staff nurses have not good knowledge and regarding VTE and its management.. This study found that age, Gender, Educational Qualification, Area of working, Clinical experience, and any training program attended regarding Prevention of VTE and its management of staff nurses are all predisposing determinants for knowledge of VTE and its management. Staff nurses need education regarding VTE and its management because Education is referred system which can be utilized to bring change in knowledge level of mothers. A nurse plays important role in educating the clients to prevent

the complications. The investigator concluded that majority of the people were not much aware about varicose vein and this study showed effectiveness of the information booklet on prevention of varicose vein. Hence awareness program in regular period will help in gaining knowledge & practices regarding prevention of varicose vein among high risk people to have a healthy society.

Recommendations

- A similar study can be conducted on large samples for the generalizations of findings and increasing knowledge & practice of staff nurses regarding VTE and its management.
- A similar study can be conducted to evaluate the efficiency of various teaching strategies like video assisted teaching programme, self-instructional module, and computer assisted instruction regarding VTE and its management.
- A similar study can be conducted in view to prepare information booklet regarding psychological aspect of staff nurses during VTE.
- A study can be conducted to assess the planned teaching programme regarding VTE.

Limitation:-

The few limitations of study are listed below-

- Study is limited to 60 staff nurses.
- Study is limited to chosen hospital of Indore (M.P).

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