PREVENTION OF DEEP VEIN THROMBOSIS AMONG POST-OPERATIVE PATIENTS: A QUASI-EXPERIMENTAL STUDY

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Abstract

A quasi experimental study was carried out on Effectiveness of Teaching Program on Prevention of Deep Vein Thrombosis (DVT) among Postoperative patients in selected Hospitals at Hyderabad, Telangana. Fifty patients after abdominal surgery were selected by simple random sampling. The pre test scores revealed majority i.e. 62% of post operative patients had moderate knowledge, while 38% had inadequate knowledge and none of them had adequate knowledge on Prevention of DVT. Whereas post test scores indicated majority i.e. 66% had adequate knowledge and none of them had inadequate knowledge. The paired ‘t’ test was found to be significant at 0.001 level. Thus, it was concluded that the Teaching Program was highly effective in improving Post operative patients’ Knowledge on Prevention of DVT. The association between Knowledge of Postoperative patients on prevention of DVT and their Educational status was found to be significant. Educational interventions to Postoperative patients will enable them to manage the peri-operative problems effectively. The researchers recommend more studies on the topic for wider generalization.

Key words: Effectiveness, Teaching Program, Prevention, Deep Vein Thrombosis, Postoperative Patients.

Introduction

Venous thrombo-embolism is one of the common post-operative complications and prevalent world-wide. In Asia, certain centers revealed that Deep Vein Thrombosis (DVT) occurred in 41% of patients undergoing major surgeries without thrombo-prophylaxis. In fact, DVT is an easily preventable complication of immobility. Hence, nurses are obligated to educate patients on prevention of DVT postoperatively and reinforce them on the mechanical prophylactic measures.

Statement of the Problem

“Effectiveness of Teaching Program on Prevention of Deep Vein Thrombosis among Postoperative Patients at selected Hospitals in Hyderabad, Telangana”

Objectives

i. To assess the level of Knowledge on prevention of DVT among postoperative patients before and after administering Teaching Program.

ii. To evaluate the Effectiveness of Teaching Program on Prevention of DVT among Postoperative Patients.

iii. To find out the Association between the pre test Knowledge scores on prevention of DVT among Postoperative patients with their selected Demographic variables.
Hypotheses

\( H_1 \) There is a significant increase in mean post-test Knowledge scores on prevention of DVT among Postoperative patients.

\( H_2 \) There is a significant association between the pre-test Knowledge scores on prevention of DVT among post operative patients with selected Demographic variables.

Conceptual Framework


Research methodology

This study used a quantitative approach with a quasi-experimental study design.

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre test</th>
<th>Intervention</th>
<th>Post test</th>
</tr>
</thead>
<tbody>
<tr>
<td>RE</td>
<td>O₁</td>
<td>X</td>
<td>O₂</td>
</tr>
</tbody>
</table>

- **RE**: Randomly selected experimental group
- **O₁**: Pre-test before administration of Teaching Program
- **X**: Administration of Teaching Program on prevention of DVT
- **O₂**: Post test after administration of Teaching Program.

Research Variables

The independent variable in the study was Teaching Program on prevention of DVT.

The dependent variable was the Knowledge on Prevention of DVT among Postoperative patients.

Setting of the Study

The setting included two super specialty hospitals in Hyderabad, selected by Simple randomization using lottery method.

Sample and Sampling technique

The total study sample was 50 post operative patients. They were selected from two hospitals by simple randomization.

Data Collection Tool

A Structured Knowledge Questionnaire was used to assess Knowledge on Prevention of DVT among Postoperative patients.

A Teaching Program was prepared and validated on the prevention of DVT.

Validity

The face and content validity of the tool and the teaching program were established.

Reliability

The reliability of the tool was found by test-retest method using Spearmen Brown’s formula. The correlation coefficient was \( r = 0.86 \).
Pilot study

The pilot study was conducted from 2\textsuperscript{nd} to 10\textsuperscript{th} Feb. 2015 revealed the feasibility and practicality of study design.

Main study

The main study was conducted from 17\textsuperscript{th} February to 6\textsuperscript{th} March 2015. The data collected was analyzed using descriptive and inferential statistics.

Data Analysis

**Table no.1**
Frequency and Percentage distribution of pre test and post test knowledge scores of postoperative patients

<table>
<thead>
<tr>
<th>Knowledge scores</th>
<th>Pre test</th>
<th>Post test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency (f)</td>
<td>Percent (%)</td>
</tr>
<tr>
<td>Inadequate Knowledge (&lt;33.33%)</td>
<td>19</td>
<td>38.0</td>
</tr>
<tr>
<td>Moderate adequate Knowledge (33.33% -66.66%)</td>
<td>31</td>
<td>62.0</td>
</tr>
<tr>
<td>Adequate Knowledge (&gt; 66.66%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Table no.1 depicts the frequency and percentage distribution of the knowledge scores. The pre test scores revealed majority i.e. 62\% of post operative patients had moderate knowledge, while 38\% had inadequate knowledge and none of them had adequate knowledge on Prevention of DVT. In post test scores majority i.e. 66\% had adequate knowledge while none of them had inadequate knowledge.
Table No.2

Paired ‘t’ test of pre test and post test Knowledge scores of
Prevention of DVT among postoperative patients

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Knowledge scores</th>
<th>Mean</th>
<th>Standard deviation (SD)</th>
<th>Standard error (SE)</th>
<th>Paired ‘t’ value</th>
<th>df</th>
<th>Interference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Pre test</td>
<td>11.92</td>
<td>3.463</td>
<td>0.490</td>
<td>13.728</td>
<td>49</td>
<td>S*</td>
</tr>
<tr>
<td>2</td>
<td>Post test</td>
<td>21.30</td>
<td>3.721</td>
<td>0.526</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*n=50

* Significant at 0.001 level of significance

The table no.2 shows that the mean post test Knowledge score was increased to 21.30 from 11.92 which indicates the gain in Knowledge. The calculated ‘t’ value (t = 13.728) was found to be significant at 0.001 level. Hence, the null hypothesis (H₀) was rejected and research hypothesis (H₁) was accepted, indicating that the Teaching Program on prevention of DVT was effective in increasing the Knowledge of sample.

Association between Knowledge scores of Postoperative patients with selected demographic variables

There was significant association between knowledge and educational qualification. There was no statistically significant association between knowledge and other demographic variables such as Age, Occupation, Income, and Source of information.

Implications of the Study

- Nursing education should focus its attention on practice, from curative to the preventive care, by using extensive health education programs.
- Nurses shall participate actively in awareness programs to modify the health-related behaviours among individuals, families and the community at large.
- Nursing research on various nursing interventions can contribute to the development of nursing profession.
Recommendations

- A similar study can be done on a larger population, to make generalization possible.
- A comparative study can be carried out on the post-operative outcomes of different major surgeries.
- A study can also be done on the prevention and management of other post-surgical complications.

Limitations of the Study

- The study was limited to 50 postoperative patients after abdominal surgery between 20-60 yrs, hence generalization was less likely.
- Study results are confined only to selected hospitals in Hyderabad which possibly would decrease credibility of the study.

Conclusion

On the basis of the study findings, it is concluded that there is a definite need to impart knowledge regarding prevention of DVT to postoperative patients and Teaching Program was found to be effective in increasing their knowledge.

References

