Original Research Article

Effect of Structured Teaching Programme on Knowledge and Practice Regarding the Use of Visual Infusion Phlebitis Scale among Staff Nurses

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ABSTRACT

Background: Each year, millions of patients admitted in the hospitals require some form of vascular access as a critical component of their medical care. [1] The insertion and daily use of these vascular access devices is associated with risks and complications that can have impact on the clinical status and outcome of the patient. [1]

Objective: The objective of the study is to determine the effect of Structured Teaching Programme (STP) on knowledge and practice regarding the use of Visual Infusion Phlebitis (VIP) scale among staff nurses.

Materials and methods: A quasi-experimental design was used to assess the effect of STP on knowledge and practice regarding the use of VIP scale. 60 staff nurses were taken from selected hospitals, 30 of which were in the experimental group and 30 were in the control group, using non-probability purposive sampling technique. The data was collected using questionnaire on Demographic Data, Structured Knowledge Questionnaire and Observation Checklist

Results: The analysis was done by descriptive and inferential statistics. The mean post-test knowledge score of staff nurses in the experimental group was 10.8 which was significantly higher than the pre-test knowledge score of -1.0. Similarly, the mean post-test practice score of staff nurse in the experimental group was 9.8 which was significantly higher than the pre-test knowledge score of 0.6. This indicates that there is a significant difference in the knowledge and practice of staff nurses after STP.

Conclusion: The present study suggests that the STP helps the staff nurses to improve their knowledge on assessing short peripheral catheters (SPCs) through the use of VIP scale. This will ultimately improve their practice that reflects on patient's safety. The findings of the study indicate that there is improvement in the knowledge and practice which showed that STP is effective in improving the knowledge and practice regarding the use of VIP scale among staff nurses.

Key Words: erythema, induration, knowledge, practice, phlebitis, palpable venous cord, short peripheral catheter, structured teaching programme, staff nurse, visual infusion phlebitis scale

INTRODUCTION

Intravenous therapy is one of the most widely used clinical interventions in hospital settings, being one of the steps implemented through peripheral venipuncture, which consists of several

steps, from material selection and peripheral venous catheter placement to the assessment of the patient's clinical condition, even after catheter removal. This process is not without risk and phlebitis stands out as the most highly incident complication. [2]

Phlebitis, that is, inflammation of the vein, may be mechanical, chemical or bacterial in origin. Phlebitis causes a cascade of unwelcome repercussions– significant pain, failure of the peripheral intravenous catheter (PIVC), interruption to prescribed therapy and requirement for insertion of a new PIVC with associated increased equipment costs and staff time. [3] Phlebitis compromises future venous access, and untreated bacterial phlebitis may lead to blood stream infection. Therefore, early detection of complications and removal of the PIVC is crucial. [3]

In addition to infection and phlebitis of peripheral catheters, non-infectious complications such as pain and bruising, patient anxiety, infiltration, inadvertent arterial puncture and injuring a nerve as well as extravasation, ecchymosis, hematoma, thrombosis and embolism are also common. [3] Peripheral catheters often fail or break before the end of treatment, which, according to studies, this rate reaches 33% to 69%, which is often due to accidental extravasation from the main vein or part of the angiocatheter from the vessel.[2] A study by Fletcher [3] showed that the incidence of thrombosis related to major vascular trauma resulted from peripheral catheter at the ICU in 8.4% and 15% of cases caused pulmonary embolism. It is the catheterization complications that lead to prolongation of hospitalization for one to three weeks and subsequently increase in the cost of treatment from 30,000 to 50,000 dollars. The costs are three to five times more than the cost of hospitalization in public wards and prevalence of deaths is 12 to 25%.[3]

A study conducted by Luciene Muniz Braga reported phlebitis rates between 7% and 68.9%. [2] The variability of results concerning phlebitis incidence may be due to the lack of consensus on the measures used for assessing phlebitis, preventing the meaningful comparison of phlebitis rates. Thus, the use of quality indicators seems to be important to improve the quality of care in order to monitor, measure, and compare, both internally and externally, the obtained results. Nurses should also identify patients with risk factors associated with the development of phlebitis and implement preventive measures so as to prevent other major complications such as thrombophlebitis and infection. [2]

According to the INS Standards of Practice 2016, the Gorski Model for Safe Infusion Therapy that predicts positive patient outcomes, including complication, prevention and patient and healthcare provider satisfaction, occurs when careful attention is given to four key areas: appropriate patient selection, effective patient education, meticulous patient care and comprehensive assessment and monitoring, and interprofessional communication and collaboration. These can only occur when evidence-based infusion care is provided by knowledgeable and competent nurses. [4]

The early identification of risk factors and intervention upon the first signs and symptoms of infiltrations and phlebitis is critical to the prevention of potentially serious adverse outcomes by the development of well-established written protocols followed by close supervision for the prevention of infiltration and phlebitis. [5] Regular assessment of the vascular access device is recommended to detect such complications and respond appropriately. Hence, Structured Teaching Programme proved to be an effective tool in order to update not just the knowledge and practice of the staff nurses, but all those involved in patient care, so as to address issues related to rising incidence of phlebitis rates.

STATEMENT OF PROBLEM

"A study to assess the Effect of Structured Teaching Programme on Knowledge and Practice regarding the use of Visual Infusion

Phlebitis Scale among staff nurses working in Selected Hospitals."

OBJECTIVES OF STUDY

1) To evaluate the knowledge and practice of staff nurses regarding the use of visual infusion phlebitis scale before and after structured teaching programme.
2) To determine the effect of structured teaching programme on knowledge and practice regarding the use of visual infusion phlebitis scale among staff nurse.
3) To find the correlation between the knowledge and practice regarding use of visual infusion phlebitis scale among staff nurses.
4) To find the association between the knowledge and practice scores with selected demographic variables.

HYPOTHESIS

H_0: There will be no effect of Structured Teaching Programme on knowledge and practice scores with selected demographic variables.

H_1: There will be effect of Structured Teaching Programme on knowledge and practice scores of staff nurses regarding visual infusion phlebitis scale.

CONCEPTUAL FRAMEWORK

The conceptual framework taken for the present study is based on General System Theory given by Ludwig Von Bertalanffy in 1968. [6,7]

METHODOLOGY

Design and setting

A quantitative research approach was used for the study. A quasi-experimental design pre-test post-test control group design was utilized. The study was conducted in D.Y.Patil Hospital and Research Centre, Pimpri, Pune-18. A non-probability purposive sampling technique was used to select 60 staff nurses, 30 of which were in the experimental group and 30 were in the control group. [8-10] Data was collected from October 2nd, 2018.

Data collection technique and tool

Data was collected from the participants who fulfilled the inclusion criteria and a written consent was obtained from each participant before conducting the study. A Structured Knowledge Questionnaire and Observation Checklist based on VIP scale [9-12] was used to collect the data and STP [13-17] was provided to the experimental group. The tool consists of:

Section A: Demographic data

Section B: Structured Knowledge Questionnaire

Section C: Observation Checklist

Section D: Structured Teaching Programme

RESULT

The analysis and interpretation of data of the study were based on the data collected by Structured Questionnaire and Observation Checklist. The results were computed using descriptive and inferential statistics as follows:

Section I: Description of samples (staff nurse) based on their demographic characteristics by frequency and percentage.

Section II: Analysis of data related to knowledge and practices of staff nurses regarding VIP scale before and after STP

Section III: Analysis of data related to the effects of STP on knowledge and practices regarding the use of VIP scale among staff nurses.

Section IV: Analysis of data related to correlation between the knowledge and practices of VIP scale among staff nurses.

Section V: Analysis of data related to the association between the knowledge and practice scores with selected demographic variables

Section I: Description of samples (staff nurse) based on their demographic characteristics by frequency and percentage.

In experimental and control group, majority of the staff nurses i.e. 56.7% and 60.0% respectively were in the age group of 21-25 years.

In experimental and control group, majority 83.3% and 90% respectively of the study participants were females.

In experimental and control groups, majority 70% and 63.3% of them were diploma nurses.

In experimental group, majority 33.3% of the staff nurses had 0-1 years of experience whereas in control group, majority 40% of them had 1-2 years of experience.

In experimental and control group, majority i.e. 83.3% and 90% o respectively had non-critical experience.

In experimental and control group, majority 43.3% and 36.7% respectively had previous knowledge of VIP scale.

In experimental and control group, majority 70% and 76.7% respectively had previous exposure to in-service educational program on assessing phlebitis (See table 1 for data on demographic profile).

Section II: Analysis of data related to knowledge and practices of staff nurses regarding visual infusion phlebitis scale before and after structured teaching program

Figure 1 showed that in experimental group, in pre-test, 46.7% of the staff nurses had very poor knowledge (score 0-5), 40% of them had poor knowledge (score 6-10) and 13.3% of them had average knowledge (score 11-15) regarding the use of VIP scale. In post-test, 23.3% of them had average knowledge (score 11-15) and 76.7% of them had good knowledge (score 16-20) regarding the use of VIP scale. This indicates that there is remarkable improvement in the knowledge of the staff nurses after STP

In control group, in pre-test, 43.3% of the staff nurses had very poor knowledge (score 0-5), 40% of them had poor knowledge (score 6-10), and 16.7% of them had average knowledge (score 11-15) regarding the use of VIP scale. In post-test, 50% of them had very poor knowledge (score 0-5) and 50% of them had poor knowledge (score 6-10) regarding the use of VIP scale. This indicates there is no improvement in the knowledge of staff nurses in control group (See Figure 1 for data on knowledge regarding the use of VIP scale).

Figure 2 shows that in experimental group, for pre-test, 60% of the staff nurses had very poor practices (score 0-5) and 40% of them had poor practices (score 6-10) regarding the use of VIP scale. In post-test, 3.3% of them had poor practices (score 0-5), 46.7% of them had average practices (score 11-15) and 50% of them had good practices (score 16-20) regarding the use of visual infusion phlebitis scale). This indicates that there is remarkable improvement in the practices of the staff nurses after STP.

In the control group, in pre-test, 53.3% of the staff nurses had very poor practices (score 0-5) and 46.7% of them had poor practices (score 6-10) regarding the use of VIP scale. In post-test, 53.3% of them had very poor practices (score 0-5), and 46.7% of them had poor practices (score 6-10) regarding the use of VIP scale. This indicates that there is no improvement in the practices of staff nurses in control group (See Figure 2 for data on practices regarding the use of VIP scale).

Section III: Analysis of data related to the effects of structured teaching program on knowledge and practices regarding the use of visual infusion phlebitis scale among staff nurses.

The researcher applied paired *t*-test for the effect of structured teaching program on knowledge regarding the use of VIP scale among staff nurses. In experimental group, average knowledge score pre-test was 6.4 which increased to 17.2 in post-test. *t*-value for this test was 20.4 with 29 degrees of freedom. Corresponding *p*-value was 0.000, which is small (less than 0.05), so null hypothesis is rejected. The knowledge regarding the use of VIP scale among staff nurses improved significantly after STP.

In control group, average score in pre-test was 6.7 which was 5.7 in post-test. *t*-value for this test was 1.8 with 29 degrees of freedom. The *p*-value for this test was 0.042, which is small, indicating that the knowledge of the staff nurses in control group worsened significantly without the structured teaching programme (See table 2

for data on effects of STP on knowledge regarding the use of VIP scale).

Table 1: Description of samples (staff nurses) based on their demographic characteristics in terms of frequency and percentage. n=30,30

Sr. No	Demographic variables	Experimental group		Control group	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1.	**Age**				
	21-25 years	17	56.7%	18	60.0%
	26-30 years	11	36.7%	10	33.3%
	31-35 years	2	6.7%	2	6.7%
2.	**Gender**				
	Male	5	16.7%	3	10.0%
	Female	25	83.3%	27	90.0%
3.	**Professional qualification of a nurse**				
	GNM	21	70.0%	19	63.3%
	B.Sc (N)	8	26.7%	8	26.7%
	PB.BSc (N)	1	3.3%	3	10.0%
4.	**Total years of experience**				
	0-1 years	10	33.3%	8	26.7%
	1-2 years	9	30.0%	12	40.0%
	2-3 years	8	26.7%	8	26.7%
	>3 years	3	10.0%	2	6.7%
5.	**Area of experience**				
	Critical	5	16.7%	3	10.0%
	Non-critical	25	83.3%	27	90.0%
6.	**Previous knowledge of visual infusion phlebitis scale**				
	Yes	13	43.3%	11	36.7%
	No	17	56.7%	19	63.3%
7.	**If yes, from where?**				
	In-service education	2	6.7%	2	6.7%
	Previous experience	3	1.0%	2	6.7%
	Others	8	26.7%	7	23.3%
8.	**Exposure to any in-service educational program on assessing phlebitis**				
	Yes	21	70.0%	23	76.7%
	No	9	30.0%	7	23.3%

The researcher applied paired *t*-test for the effects of STP regarding the use of VIP scale among staff nurses. In experimental group, average practice score in pre-test was 5.2, which increased to 15 in post-test. *t*-value for this comparison was 22.5, with 29 degree of freedom. Corresponding *p*-value was 0.000, which is small (less than 0.05), the null hypothesis is rejected. This indicates that the practices regarding the use of VIP scale among staff nurses improved significantly after the STP.

Table 2: paired *t*-test for the effect of structured teaching on knowledge regarding the use of visual infusion phlebitis scale among staff nurses   n=30,30

Group		Mean	SD	T	df	p-value
Experimental group	Pre-test	6.4	3.3	20.4	29	0.000
	Post-test	17.2	1.7			
Control group	Pre-test	6.7	3.3	1.8	29	0.042
	Post-test	5.7	1.5			

Table 3: Paired *t*-test for the effect of health teaching on practice regarding the use of visual infusion phlebitis scale among staff nurses   n=30,30

Group		Mean	S.D	't'	df	p-value
Experimental group	Pre-test	5.2	1.7	22.5	29	0.000
	Post-test	15.0	2.2			
Control group	Pre-test	5.1	1.7	1.9	29	0.035
	Post-test	5.8	1.6			

In control group, average practice score in pre-test was 5.1, which was as 5.8 in post-test. *t* value for this test was 1.9, with 29 degree of freedom. The *p*-value for this test was 0.035, which is small, indicating that the practices of the staff nurses improved without the STP (See table 3 for data on effects of STP on practices regarding the use of VIP scale).

The researcher applied two sample *t*-test for comparison of the knowledge gain in experimental and control group staff nurses regarding the use of VIP scale. Average knowledge gain in experimental group was 10.8, which was -1.0 for control group. *t*-value for this test was 15.3, with 58 degree of freedom. Corresponding *p*-value

was 0.000, which is small (less than 0.05), the null hypothesis is rejected. The knowledge gain in experimental group staff nurses is significantly high as compared to those from the control group. This is evident that the knowledge of the staff nurses improved significantly after STP (See table 4 for data on comparison of knowledge gain after STP).

The researcher applied two sample *t*-test for comparison of the practice gain in experimental and control group staff nurses regarding the use of visual infusion phlebitis scale. Average practices gain in experimental group was 9.8 which was 0.6 for control group. *t*-value for this test was 16.7 with 58 degree of freedom. Corresponding *p*-value was 0.000, which is small (less than 0.05), the null hypothesis is

rejected. The practices gain in experimental group staff nurses is significantly high as compared to those of the control group. This is evident that the practices of the staff nurses improved significantly after STP (See table 5 for data on comparison of knowledge gain after STP).

Table 4: Two-sample *t*-test for comparison of the knowledge gain in experimental and control group staff nurses regarding the use of visual infusion phlebitis scale   n=30,30

Group	Mean	SD	T	df	p-value
Experimental	10.8	2.9	15.3	58	0.000
Control	1.0	3.1			

Table 5: Two sample *t*-test for comparison of the practices gain in experimental and control group among staff nurses regarding the use of visual infusion phlebitis scale   n=30,30

Group	Mean	SD	T	Df	p-value
Experimental	9.8	2.4	16.7	58	0.000
Control	0.6	1.8			

Table 6: Fisher's exact test for association between the knowledge with selected demographic variables   .   n=60

Sr.No	Demographic variable	Knowledge			p-value
		Very poor	Poor	Average	
1.	Age				
	21-25 years	23	8	4	0.001
	26-30 years	3	14	4	
	31-35 years	1	2	1	
2.	Gender				
	Male	3	2	3	0.186
	Female	24	22	6	
3.	Professional qualification of a nurse				
	GNM (N)	24	14	2	0.001
	B.Sc (N)	3	7	6	
	PB.BSc (N)	0	3	1	
4.	Total years of experience				
	0-1 years	13	4	1	0.032
	1-2 years	10	8	3	
	2-3 years	3	10	3	
	>3 years	1	2	2	
5.	Area of experience				
	Critical	2	4	2	0.399
	Non-critical	25	20	7	
6.	Previous knowledge of visual infusion phlebitis				
	Yes	5	12	7	0.003
	No	22	12	2	
7.	Exposure to any in-service educational programme on assessing phlebitis				
	Yes	15	21	8	0.026
	No	12	3	1	

Section IV: Analysis of data related to correlation between the knowledge and practices of visual infusion phlebitis scale among staff nurses.

Figure 3 showed the correlation between the knowledge and practices among staff nurses regarding the use of visual infusion phlebitis scale which was assessed using Pearson's correlation

coefficient. Correlation was found to be 0.08 which is positive though small. The significance of this positive correlation between knowledge and practices were tested using *t*-test for significance of correlation coefficient. *t*-value for this test was 0.69 with 58 degrees of freedom. Corresponding *p*-value was 0.246, which is large (greater than 0.05), which indicates

that though there is a positive correlation between knowledge and practices among staff nurses regarding use of VIP scale, this correlation is not statistically significant

(See figure 3 for data on correlation between knowledge and practices of VIP scale).

Table 7: Fisher's exact test for association between the practices with selected demographic variables.   **n=60**

Sr.no	Demographic variable	Practices		p-value
		Poor	Very poor	
1.	**Age**			
	21-25 years	15	20	**0.414**
	26-30 years	8	13	
	31-35 years	3	1	
2.	**Gender**			
	Male	6	2	**0.066**
	Female	20	32	
3.	**Professional qualification of a nurse**			
	GNM (N)	16	24	**0.082**
	B.Sc (N)	6	10	
	PB.BSc (N)	4	0	
4.	**Total years of experience**			
	0-1 years	7	11	**0.877**
	1-2 years	9	12	
	2-3 years	7	9	
	> 3 years	3	2	
5.	**Area of experience**			
	Critical	2	6	**0.446**
	Non-critical	24	28	
6.	**Previous knowledge of visual infusion phlebitis scale**			
	Yes	11	13	**0.795**
	No	15	21	
7.	**Exposure to any in-service educational programme on assessing phlebitis**			
	Yes	21	23	**0.378**
	No	5	11	

Figure 1: Bar graph showing analysis of data related to knowledge of staff nurses regarding the use of visual infusion phlebitis scale before and after structured teaching programme.   **n=30,30**

Section V: Analysis of data related to the association between the knowledge and practices scores with selected demographic variables

Table 6 showed that since *p*-values corresponding to demographic variables i.e age, professional qualification of a nurse, total years of experience, previous knowledge of visual infusion phlebitis scale and exposure to in-service educational program on assessing phlebitis

are small (less than 0.05), these variables were found to have significant association with the knowledge of the staff nurses regarding the use of VIP scale (See table 6 for data on association between knowledge with selected demographic variables).

Table 7 showed that since all the *p*-values were large (greater than 0.05), none of the demographic variables were found to have significant association with practices of staff nurses regarding the use of visual infusion phlebitis scale (See table 6 for data on association between knowledge with selected demographic variables).
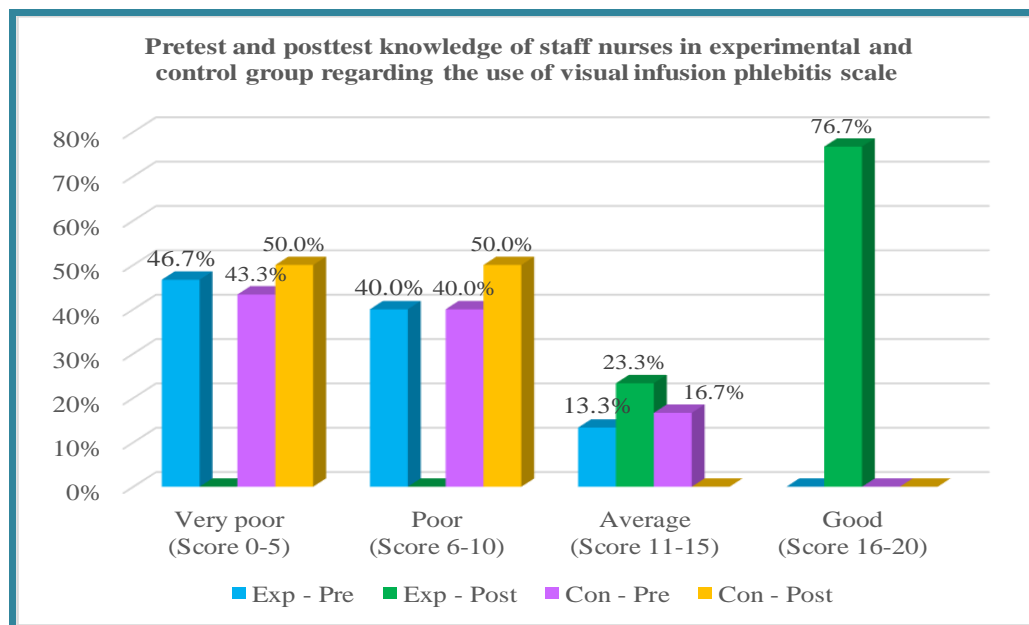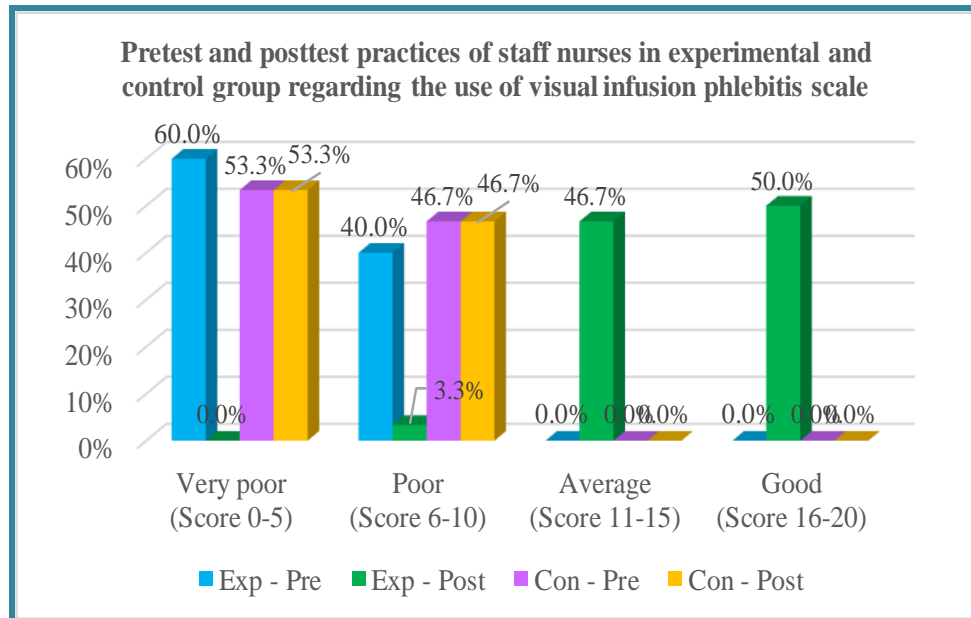

Figure 2: Bar graph showing analysis of data related to practice of staff nurses regarding the use of visual infusion phlebitis scale before and after structured teaching programme.   n=30,30
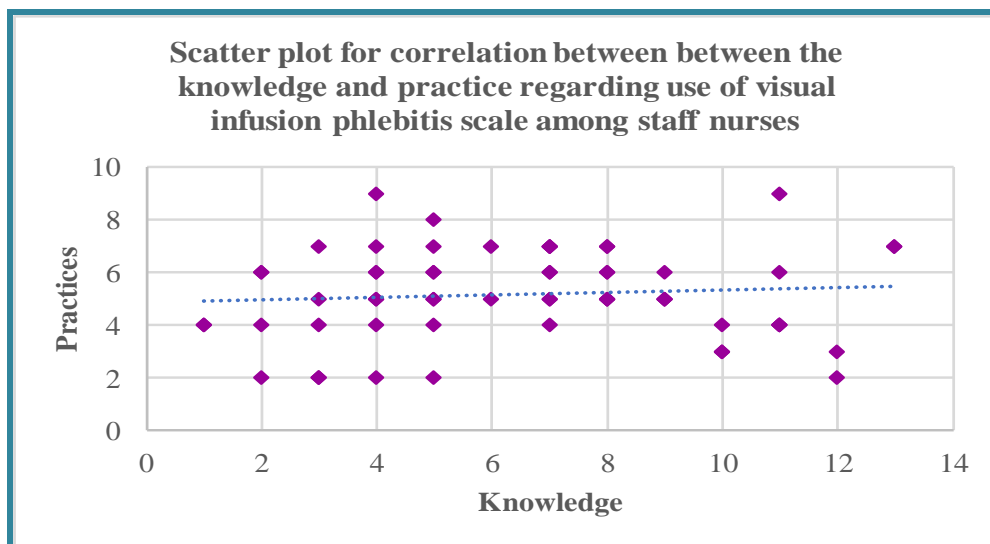
Figure 3: Analysis of data correlation between knowledge and practice regarding use of visual infusion phlebitis scale among staff nurses   n=60

DISCUSSION

The findings of the study can be discussed with reference to other studies.

A similar study was conducted on the effectiveness of Structured Teaching Programme on Knowledge and Practice Regarding Intravenous Cannulation among the Staff Nurses. A sample of 60 staff nurses were selected by using convenience sampling technique. [19] The findings revealed that majority 52 (86.7%) of the staff nurses had adequate knowledge and

majority 47 (78.3%) of the staff nurses had improve in their practice in the post-test. There was significance difference between the pre-test and post-test knowledge score (t=13.72 at p< 0.05 level). There was a high positive correlation (r=0.9) between the pre-test knowledge and practice score of the staff nurses. The pre-test knowledge score of the staff nurses was found to be associated with educational qualification. The pretest practice score of the staff nurses was found to be associated with age, educational qualification and year of experience. [18]

In the present study, pre-test scores of knowledge in experimental group shows that 46.7% had very poor knowledge, 40.0% had poor knowledge and 13.3% had average knowledge. In control group, 43.3% had very poor knowledge, 40.0% had poor knowledge and 16.7% had average knowledge. After STP for experimental group, post-test showed that 76.7% had good knowledge and 23.3% had average knowledge, whereas in control group, 50% had very poor knowledge and 50% had poor knowledge. With regards to practices, in the experimental group, pre-test showed 60.0% of the staff nurses had very poor practices and 40.0% had poor practices, whereas in the control group, 53.3% had very poor practices and 46.7% had poor practices regarding visual infusion phlebitis scale. In the post-test, in the experimental group, 50.0% had good practices, 46.7% had average practices and 3.3% had poor practices, whereas in the control group, the score remained the same.

Thus, from the above findings, it indicates that there is a significant improvement in the knowledge and practices of staff nurses in experimental group who have received STP, as compared to the control group. Thus, the hypothesis was accepted that there is significant difference in pre-test and post-test knowledge and practice scores on VIP scale among staff nurses post STP. However, care also needs to be taken regarding the importance of good practices as the above

findings also indicates that, although there is a rise in the practice scores post STP, the practices score were not suitable to their knowledge level. As the nurse has a major role in prevention of complications of phlebitis, effective practices is also needed for prevention against such complications.

The Infusion Nurses Society suggested competence assessment and validation to be performed initially and on ongoing basis. Observe performance of knowledge and skills in the work environment is the preferred method for invasive infusion therapy procedures. [19] As the saying goes, 'A smart approach increases patient safety,' hence the nurses must be updated to current knowledge on how to find ways that can contribute towards patient safety and well-being. Specific training needs to be incorporated into the nursing clinical practices regarding current approaches to prevent occurrence and complications of phlebitis, reduces the issues and burden in the routine work, as well as gain a new outlook and perspective in the nursing field. [20,21]

CONCLUSION

The study was conducted to assess the effects of Structured Teaching Program on knowledge and practice regarding the use of Visual Infusion Phlebitis scale among staff nurses. Based on data collected, and after statistical analysis was done, it was found that there is significant difference in pre-test and post-test knowledge and practice scores on Visual Infusion Phlebitis scale among staff nurses. Corresponding p-value for knowledge and practices score in experimental group was found to be small (less than 0.05), hence null hypothesis is rejected and the hypothesis H_1 is accepted, indicating that the Structured Teaching Programme is highly effective in improving in the knowledge and practices of staff nurses regarding visual infusion phlebitis scale. Similarly, correlation between the knowledge and practices among staff nurses regarding the use of Visual Infusion Phlebitis scale was assessed using Pearson's

correlation coefficient. Corresponding p-value was 0.246, which is large (greater than 0.05), which indicates that though there is a positive correlation between knowledge and practices among staff nurses regarding use of Visual Infusion Phlebitis scale, this correlation is not statistically significant.

Analysis of data related to association between knowledge and practice score was done using Fisher's exact test. Since p-values corresponding to demographic variables are small (less than 0.05), the demographic variables i.e. age and professional qualification of a nurse, total years of experience, previous knowledge of Visual Infusion Phlebitis scale and exposure to in-service educational program on assessing phlebitis, were found to have significant association with the knowledge of the staff nurses regarding the use of Visual Infusion Phlebitis scale. Similarly, with regards to practice, since all the p-values were large (greater than 0.05), none of the demographic variables were found to have significant association with practices of staff nurses regarding the use of Visual Infusion Phlebitis scale.

As the current emphasis of healthcare nowadays is on health and wellness of the patient, staff nurses working in the hospital settings need to know about the complications due to use of venous assess devices as well as the methods of assessment, so as to promote wellness and prevent the patients from any such complications. Hence, staff nurses require continuous and adequate training. One method that can help in improving their knowledge and practices is by conducting Structured Teaching Programme. As the study itself have shown, Structured Teaching Programme is an effective tool that can be adopted as one of the method in improvising the skills and technique of nurses towards providing patient safety care. The teaching programme is perceived as beneficial, as it not only enhanced patient care but it also helps motivate and enhance confidence of the staff nurses in providing care. It should be given at periodic intervals.

Suitable intervention packages need to be developed and in-service education need to be given periodically for the effectiveness of qualitative nursing services.

IMPLICATION OF THE STUDY

Nursing is a dynamic process, which involved quality-based practice, scientific knowledge, and dissemination of research knowledge into practice. Nursing professional finds that health promotion is very relevant and useful in a variety of settings. So the present study adds major implications into nursing research, administration, practice and education.

Nursing practice

- ❖ Nurses can use the structured teaching program to further increase and brings awareness regarding the importance of proper assessment for phlebitis using a standardized tool.
- ❖ Nurses can use the charts provided from the study to correlate the importance between the knowledge and practice.
- ❖ Measures can be taken to reduce the incidence involved with phlebitis.

Nursing education

Nursing education should prepare effective and competent future nurses. Active participation of the student nurses in conducting educational programs is required to provide information regarding the procedure and current trends to the nurses.[19]

- ❖ Based on the current research study, the researcher can also use the result to discuss the importance of VIP (visual infusion phlebitis) scale and also inculcate it into the nursing curriculum.
- ❖ Health information can be imparted through various methods like lecture, incidental teaching and mass media.

Nursing administration

- ❖ Nurse administrator can assess the limits or factors preventing affecting proper assessment, and provide education on the same.
- ❖ Nursing administration can also instill policy and protocols on assessing

phlebitis by adopting the Visual infusion phlebitis scale. [19,21]

Nursing research

- ❖ The research conducted can be a baseline for future studies to build upon.
- ❖ Future research studies could be done to identify the factors influencing assessment of phlebitis.
- ❖ Evidenced based research can be further conducted regarding interventions required to prevent phlebitis, as this approach helps to provide the highest quality and most efficient patient care possible. [19,20]

Limitations

The study was conducted only in one hospital and hence generalization was limited.

Recommendations

1. A similar study can be conducted on a larger sample for broader generalization.
2. Studies can be conducted using other methods of teaching.
3. More studies need to be conducted to know the association between knowledge, practice and attitude regarding the assessment of phlebitis.
4. A comparative study between critical care and non-critical care nurses can be conducted.
5. Studies can also be conducted on factors influencing non-compliance with regards to assessment of phlebitis.

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