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"A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING CARE OF CENTRAL LINE AMONG ICU NURSES WORKING IN A SELECTED HOSPITAL OF UDAIPUR CITY."

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ABSTRACT:

Background: Central venous catheterization have been a mainstay of modern medicine for decades, widely used across all medical specialties from cardiology to oncology, from the emergency department to the intensive care unit. Central lines were first introduced in the early 1950's and used in military medicine for the treatment of battle field causalities. In the 1960's central lines were used to provide parenteral nutrition and to directly measure blood pressure for hemodynamic monitoring[1].

Method: Pre- experimental one group pre-test and post- test design was utilized to collect data from 68 ICU nurses by using simple random sampling method to assess the effectiveness of structured teaching programme (STP) on knowledge regarding care of central line among nurses. The post-test administered seven days after the intervention.

Result: The findings revealed that in pretest 88.33% respondents were found with poor level of knowledge whereas with post- test 21.67% of the respondents had poor knowledge level, 11.67% respondents had average knowledge level in the pre-test whereas in post-test it was 75.00%, there were no respondents found good knowledge level in pre-test where as in post-test 3.33%. The study concluded that there was significant improvement in the level of knowledge of nurses regarding care of central line. This indicated that the structured teaching programme was found effective.

Conclusion: The overall mean pre-test knowledge scores regarding care of central line was 48.64%.The overall mean post-test knowledge scores regarding care of central line was 72.64%.Enhancement overall mean knowledge scores was 24%.The paired t-test value was 23.78.There was a significant difference between mean pre-test knowledge scores and post-test knowledge scores which depicted that structured teaching programme was an effective strategy to enhance the knowledge of ICU nurses regarding care of central line. There was no significant association between mean pre-test knowledge scores and socio- demographic variables like age, gender, educational qualification, working experience and in-service education programme attended.

KEYWORDS: Knowledge, care of central line, effectiveness, structured teaching programme.

INTRODUCTION:

A central venous catheter (CVC), also known as a central line, is long, soft, thin, hollow tube that is placed into a large vein (blood vessel). A central line is much like an intravenous (IV) catheter that is placedin a small vein in an arm, except that a central line is longer and is placed in a large vein leading to the heart in the neck, upper chest, leg, or arm. This type of catheter has special benefits in that it can deliver fluids into a larger vein and that it can stay in the body for a much longer period of time than a usual shorter IVCommon reasonsfor having a central line include, to give IV medications over a long period of time because a large vein can tolerate an IVcatheter for a longer time than a small vein, to rapidly deliver large amounts of fluid or blood[2].

Central line–associated bloodstream infections (CLABSIs), defined as bloodstream infections in patients with a central line 48 hours before infection onset, not related to another site. CLABSIs are associated with increased morbidity, leading to increased length of hospitalization and resource use, and might impact mortality and compromise patient prognosis[3].

METHOD

Study Design, Setting, And Participants- This study was carried out in Maharana bhupal government hospital Udaipur, Rajasthan. A pre-experimental research design with evaluative approach was used. A simple random sampling technique was used to collect 68 ICU nurses from 8th September to 22th September 2016. The purpose of the study was explained to the group and confidentiality of their responses was assured. After obtaining the permission and consent, pre-test were taken on the first day and the structured teaching programme on care of central line was administered to the respondents on the same day after pre-test. Post-test was taken on the seventh day using same structured knowledge questionnaire.

Inclusion Criteria: The inclusion criteria were ICU Nurses who were available at the time of data collection and willing to participate in the study.

Exclusion Criteria: ICU Nurses who were absent during the time of data collection because of any reason and who were not willing to be part of this study were excluded from the study and Nurses who were Not consented to participate in study.

Ethical Consideration: After obtaining permission from research committee of RNT Medical College Udaipur, permission was obtained from Medical superintendent of MBGH Udaipur, Consent was taken from each respondent who had participated in the study.

Data Analysis: In this study data obtained were analyzed on the basis of the objectives of the study using descriptive and inferential statistics.A master data sheet was prepared with responses given by respondents. The plan for data analysis was as Description of socio- demographic variables, Mean, median, SD and mean percentage were used to describe the pre-test and post –test knowledge scores of the respondents on care of central line, Paired 't' test was used to find the effectiveness of structured teaching programme by comparing mean pre-test and post-test knowledge scores of the respondents and Chi–square was used to find-out the association between the pre-test knowledge scores of the respondents and selected socio-demographic variables.

Description of The Tool: The tool consisted of two sections. Section AConsistedofselected Socio demographicvariableswhichinclude age, gender,educational qualification, working experience and in-service education programme attended and Section B Consisted of structured knowledge questionnaire on care of central line.

RESULT

Table 1 and Figure 1 depict the comparison of mean pre- test & post-test knowledge scores among 68 ICU nurses regarding care of central line. The mean pre-test knowledge scores was 12.16 with SD 2.24 mean percentage was 48.64%. The mean post-test knowledge score was 18.16 with SD 2.16 mean percentage was 72.64%. The calculated t-value was 23.78 at df 67.Statistical analysis showed that there was significant difference between mean pre- test knowledge scores and post- test knowledge scores which depicted that structured teaching programme was an effective strategy to enhance the knowledge of ICU nurses regarding care of central line. Hence H1: There will be a significant difference between mean pre-test and post-test knowledge scores regarding care of central line among nurses was accepted.

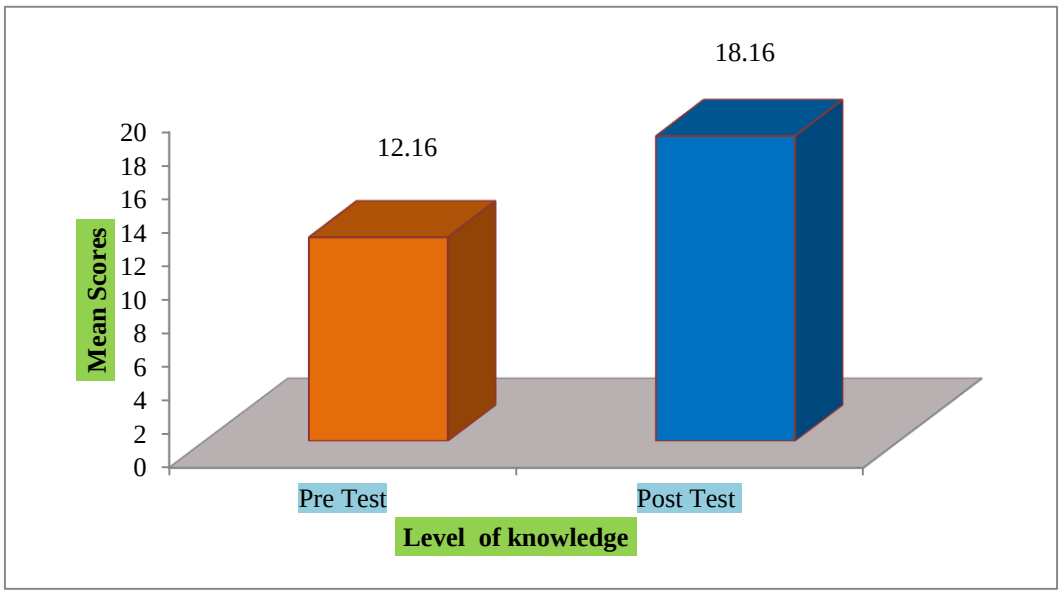
Table:1 Effectiveness of STP on Knowledge Regarding Care of Central Line.

N=68

	Mean	Mean (%)	SD	Df	t-value	Level of Significance
Pre-test	12.16	48.64	2.24	67	23.78	S*
Post-test	18.16	72.64	2.6			

***S= Significant P<0.05**

Figure: 1 Effectiveness of STP on Knowledge Regarding Care of Central Line



Tables 2 depict the Association between Mean Pre-Test Knowledge Scores and Selected Socio-demographic Variables. There was no significant association between mean pre-test knowledge scores and socio- demographic variables like age, gender, educational qualification, working experience and in-service education programme attended. The calculated value was less than tabulated value with df which reveals that there was statistically no significant association between Selected Socio-Demographic Variables and mean pre-test knowledge scores. Therefore H2- There will be significant association between mean pre-test knowledge scores with selected socio-demographic variables was rejected.

Table: 2 Associations between Mean Pre-Test Knowledge Scores and Selected Socio-Demographic Variables.

N=68

S. No.	Variables	Category	Below Median	Above median	Total	Df	$\chi 2$	table Value	Inference
1.	Age in years	20-25 year	8	8	68	3	0.35	7.81	NS*
		25-30 year	19	16					
		30-35 year	07	07					
		Above 35 year	02	01					
2.	Gender	Male	13	18	68	1	2.77	3.84	NS*
		Female	23	14					
3.	Educational Qualification	GNM	32	32	68	2	3.78	5.99	NS*
		P.B.BSc.	03	0					
		B.Sc. Nursing	01	0					
4.	Working experience in years	Less than 1 Year	02	02	68	3	2.83	7.81	NS*
		1-5 Year	25	16					
		5-10 Year	07	11					
		10 Year & above	02	03					
5.	In-service Education Programme Attended	Yes	04	06	68	1	0.78	3.84	NS*
		No	32	26					

*** NS= Not Significant P>0.05**

DISCUSSION

In present study description of respondents according to selected socio-demographic variables in age in years the majority of the respondents (51.5 %) were from age group of 26-30 years, (23.5%) respondents were from age group of 20-25 years, (20.6%) respondents were from age group of 31-35 years and least (4.4%) respondents were from age group of 36 years & above. In gender the majority of the respondents (54.4 %) were female and (45.6%) respondents were male. In educational qualification:- the majority (94.1%) of the respondents were qualified GNM, (4.4%) respondents had P.B.BSc. Nursing qualified and least (1.5%) respondent had B.Sc. Nursing qualified. In working experience:- the majority of the respondents (60.3%) had 1-5 years of experience, (26.5 %) respondents had 6-10 years of experience, (7.4 %) respondents had experience above 10 years and least (5.9%) respondents had less than 1 year of experience. In-service education programme the majority of the respondents (85.3%) had not attended in- service education programme and (14.7%) respondents had attended in-service education programme.

Statistical analysis showed that there was significant difference between mean Pre- test knowledge scores and Post- test knowledge scores. The calculated t-value was 23.78 at df 67. Statistical analysis showed that there was significant difference between mean pre- test knowledge scores and post- test knowledge scores which depicted that structured teaching programme was an effective strategy to enhance the knowledge of ICU nurses regarding care of central line.

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DICLARATION
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Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

RECOMMONDATION
In the light of the findings listed above and form the personal experiences of the following recommendations are offered.

- The structured teaching programme developed by the researcher was found to be effective in increasing knowledge of nurses regarding care of central line to prevent and control central line associated bloodstream infections. It can therefore utilize by health professionals especially ICU nurses for health education in various health settings.
- The study can be replicated on a larger sample their findings can be generalized for a larger population.

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