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Original Research Paper

Nursing

A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING BRADEN SCALE ASSESSMENT AMONG STAFF NURSES

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ABSTRACT

The research aimed at finding the effectiveness of structured teaching programme related to Braden scale assessment on knowledge among staff nurses. One-group pre-test and post-test methods of pre-experimental design were taken. The samples for the study were chosen by non-probability purposive sampling. 83 staff nurses were selected as sample based on the selection criteria. A structured observational checklist was developed based on review of literature and opinion from experts. Level of knowledge was studied in relation to various aspects like knowledge on pressure ulcer, stages of PU, difference between PU and IAD, risk assessment of PU, various parameters of Braden Scale. In post- test, only 13(16%) of the staff nurses had inadequate knowledge and 70(84%) had adequate knowledge regarding Braden Scale assessment. The study revealed that exposure to structured teaching programme had caused significant difference in knowledge ('t' value 17.58) level among staff nurses.. Further, association between pre and post test knowledge score and education and experience had been conducted. The association between educational qualification of staff nurses with pre test score was found significant whereas the post test score was not significant. This again concluded the efficacy of the structured teaching programme on Braden Scale Assessment that it was well understood by both GNM and B.Sc. Nurses.

KEYWORDS : Braden Scale, Structured Teaching Programme

BACKGROUND

Pressure Ulcers (PUs) are associated with high mortality, morbidity, and health care costs. In addition to being costly, PUs cause pain, suffering, infection, a lower quality of life, extended hospital stay and even death. Although several nursing interventions have been advocated , there is a paucity of research on what constitutes the most effective nursing intervention.

Pressure Ulcer (PU) prevalence allows benchmarking within and across facilities. The International Pressure Ulcer Prevalence (IPUP) Survey is unique as it includes a variety of care settings and participants include community and larger teaching facilities. A study conducted by VanGilder C, et al. with the purpose to present 10 years of US prevalence data and demographic data (2006-2015) by care setting which proved quiet high.

Pressure Ulcers are a complication of immobility, but are now being viewed as a failure of the healthcare system. Despite the fact that the overwhelming majority of PU are preventable ,they still occur too often , usually due to lack of adherence to PU prevention protocols.

OBJECTIVES

1. To assess the existing level of knowledge regarding Braden Scale assessment among staff nurses.
2. To evaluate the effectiveness of structured teaching programme on Braden Scale among staff nurses.

CONCEPTUAL FRAMEWORK

The Systems Theory introduced by Karl Ludwig von Bertalanffy had been applied in this study.

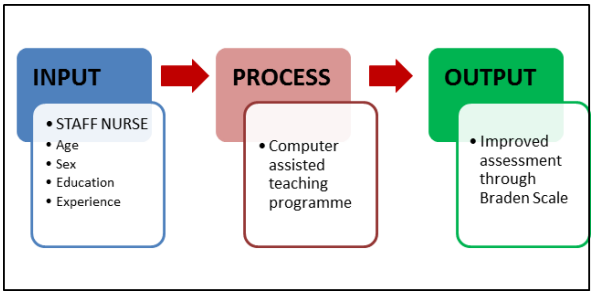

Fig 1 :- Conceptual Framework based on Systems Theory by Karl Ludwig von Bertalanffy

METHODS AND PROCEDURE:

To find the effectiveness of an intervention, an evaluatory approach will be the best suited. In this study, the investigator desired to evaluate the effectiveness of a structured teaching programme on Braden Scale Assessment among staff nurses.

Research Design

Pre- experimental Research Design had been adopted by the investigator

Variables

Independent variable was structured teaching programme(STP) on Braden Assessment
Dependent variable was Knowledge on Braden Scale assessment .
Background Variable for each staff nurses such as age, sex, education, experience are assessed and recorded.

Settings

In this study, a 700 bedded multispeciality hospital was choosed to be the best setting.

Sample and Sample Size

83 considering the availability of sample and as per inclusion criteria.

In this study, initially sample of 100 staff nurses were taken. During STP 11 nurses were on leave and 2 nurses left job. During post test evaluation it was found 2 were sick,3 on leave and 1 left job.

Attendance sheet was tallyed and same sample of 83 staff nurses who were present throughout the pre-test, STP and post- test were considered.

The Sampling Technique

The researcher considered non probability purposive sampling as sampling technique.

The following sample selection criteria are considered:-
Inclusion criteria

- Nurses who work at bedside
- Nurses of both the sex
- Nurses with age limit of 21 years and above
- Nurses with the qualification of GNM and B.Sc(N).
- Nurses of Criticare unit – ICU,CCU and HDU

Exclusion criteria

- Nurses who work as ICN, Managers, educators
- Nurses with the qualification above B.Sc.(N)
- Nurses with the qualification of ANM.
- Nurses of wards, dialysis, emergency and OPD.

VALIDITY AND RELIABILITY OF THE TOOL

The tool and the structured teaching programme were validated by five experts including three post graduate nurses and two medical experts. The items were evaluated for clarity, relevance and appropriateness. As a tool the researcher had used structured interview schedule and observation checklist. The reliability of the structured interview schedule was tested by test-re-test method. Reliability was computed using Karl Pearson's Correlation Coefficient method, r = 0.89. The reliability coefficient was found to be high. Thus the tools were found to be reliable for data collection.

FINAL DATA COLLECTION PROCEDURE:

Consent of Nursing Director and Nursing Managers and staff nurses were taken. Pre test knowledge of the staff nurse was assessed through Observation checklist. Structured Teaching programme was given in small groups (Each group = 3-5 Nurses) throughout the month. Each nurse had attended one STP.Structured Teaching Programme comprise of PPT Presentation (Computer assisted) and handouts. Post test knowledge of the staff nurse was assessed through Observation Checklist. Thanksgiving were given to the participant staff nurse. Like this data from 83 staff nurses were taken

RESULTS:

Background Variables

In this study, major background factors of staff nurses such as age, sex, education, experience was considered .In regard to age 44 (53%) had age more than 25years whereas 39 (47%) of staff nurses were aged between 21-25 years. Further, 46 (56%) were sisters (female nurse) compare to 37 (44%) brothers (male nurses).Regarding educational qualification majority 46(55%) were GNM whereas rest 37(45%) were B.Sc. Nursing.

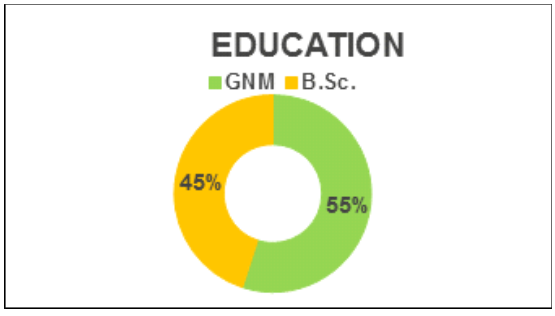

Fig 2 : Percentage distribution of educational qualification among staff nurse

With Regard to experience, almost 65 (78%) of the staff nurse was experienced more than six months whereas 18 (22%) staff nurse had less exerience of 5-6 months only.

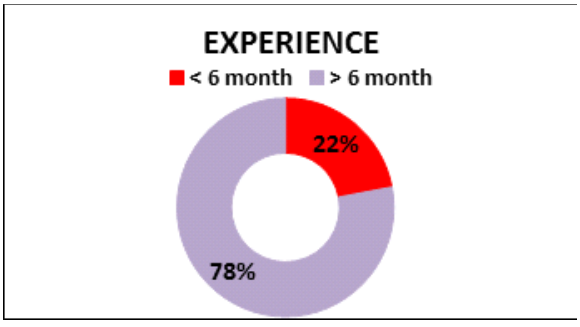

Fig 3: Percentage distribution of experience among staff nurse

Therefore, it was inferred that majority were female nurses aged above 25 years and educational background with GNM qualification and experience more that six month.

Significant Difference Between Pre And Post Test Knowledge Score:-

Study findings revealed that in pre- test, majority of the staff nurses 52 (63%) had inadequate knowledge and 31(37%) had adequate knowledge regarding Braden Scale assessment. In post- test, only 13(16%) of the staff nurses had inadequate knowledge and 70(84%) had adequate knowledge regarding Braden Scale assessment.

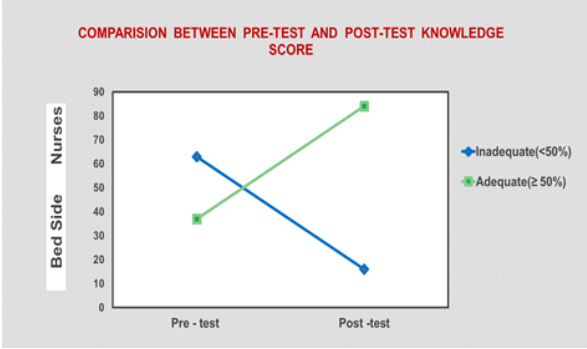

Fig 4 : Comparision between overall pre-test and post-test knowledge score

In case of Braden Scale Assessment the ability to understand and assess patient correctly in all the six parameters like 'Sensory Perception', 'Moisture', 'Activity ', 'Mobility', 'Nutrition' and ' Friction & Shear' was observed before and after the structured teaching programme.

In pre-test majority of the staff nurses 58 (70%), 61(73%), 58 (70%), 60(72%),61(73%) and 63 (76%) were unable to understand and assess correctly whereas 25 (30%), 22 (27%), 25 (30%), 23 (28%), 22 (27%) and 20(24%) were able to understand and assess correctly on Braden Scale parameters of 'Sensory Perception', 'Moisture', 'Activity ', 'Mobility', 'Nutrition' and ' Friction & Shear' respectively.

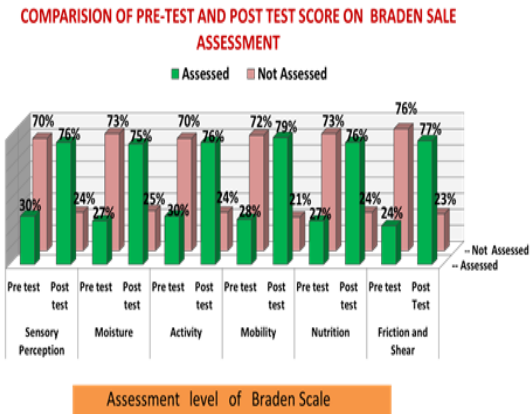

Fig 5 :- Comparison of pre-test and post- test score on parameters of Braden Scale among staff nurses

In post-test majority of the staff nurses 63(76%), 62(75%),63(76%), 61(79%),63(76%) and 63 (77%) were able to understand and assess correctly whereas 20 (24%), 21(25%), 20(24%), 23 (28%), 22 (27%) and 20(24%) were unable to understand and assess correctly on Braden Scale parameters of 'Sensory Perception', 'Moisture', 'Activity ', 'Mobility', 'Nutrition' and ' Friction & Shear' respectively.

H_1 - There will be a significant difference between pre-test and post-test knowledge level among staff nurses regarding Braden Scale assessment. $K_1 \neq K_2$

H_{01}- There will be no significant difference between pre-test and post-test knowledge among staff nurses regarding Braden Scale assessment. $K_1 = K_2$

Table $_1$: shows significant difference between pre- test and post- test knowledge score

SIGNIFICANT DIFFERENCE BETWEEN PRE AND POST TEST KNOWLEDGE SCORE					
n= 83					
GROUP	LEVEL	Mean Knowledge	Mean Difference	Standard Deviation	't' value
Staff Nurses	Pre - test	11.13	1.99	2.39	17.58
	Post-test	13.12		2.46	
p< 0.05					

The mean difference between the pre-test and post-test knowledge was 1.99. The obtained 't' value 17.58 ($p < 0.05$) was significant. Hence the null hypothesis (H_{01}) was rejected and the research hypothesis (H_1) was accepted. There was significant difference in knowledge regarding Braden Scale Assessment before and after the administration of structured teaching programme. It was inferred that the knowledge was significantly increased after the structured teaching programme. Hence the structured teaching programme was found to be effective to enhance the knowledge of staff nurses.

Data On Association Of Background Variables On Pre -test and Post-Test Knowledge Regarding Braden Scale Assessment The selected background factors considered by the researcher to test the association with the knowledge regarding Braden Scale Assessment were: educational qualification and months of experience. These background factors were compared with both pre –test and post-test knowledge level and the association was tested among them by using chi-square test

(A) ASSOCIATION WITH EDUCATIONAL QUALIFICATION

Table2:shows association between educational qualification and pre-test knowledge

ASSOCIATION BETWEEN EDUCATIONAL QUALIFICATION AND PRE -TEST KNOWLEDGE					
EDUCATIONAL QUALIFICATION	Inadequate		Adequate		Chi - square' χ^2 ' Value
	n	%	n	%	
B.Sc. Nsg	14	17%	23	27%	**17.56**
GNM	38	46%	8	10%	
p< 0.05					

The chi-square statistic was 17.56. The p-value was 0.000028. The result was statistically significant at $p < 0.05$. There was significant association between educational qualification and pre-test knowledge among staff nurses.

Table 3: shows association between educational qualification and post-test knowledge

ASSOCIATION BETWEEN EDUCATIONAL QUALIFICATION AND POST -TEST KNOWLEDGE					
EDUCATIONAL QUALIFICATION	Inadequate		Adequate		Chi - square' χ^2 ' Value
	n	%	n	%	
B.Sc. Nsg	5	6%	32	38%	**0.233**
GNM	8	10%	38	46%	
p< 0.05					

The chi-square statistic was 0.233. The p-value was 0.628989. The result was statistically not significant at $p < 0.05$. There was no significant association between educational qualification and post-test knowledge among staff nurses.

Therefore, we can inferred that the structured teaching programme on Braden Scale was well understood by both the GNM and BSc Staff nurses. Hence the structured teaching programme was found to be effective.

(B) ASSOCIATION WITH EXPERIENCE

Table 4: shows association between experience and pre-test knowledge

ASSOCIATION BETWEEN EXPERINCE AND PRE -TEST KNOWLEDGE					
EXPERIENCE	Inadequate		Adequate		Chi – square ' χ^2 ' Value
	n	%	n	%	
≥ 6month	16	19.3%	2	2.4%	**6.76**
< 6month	36	43.4%	29	34.9%	
p< 0.05					

The chi-square statistic was 6.76. The p-value was 0.00931. The result was statistically significant at $p < 0.05$. There was significant association between experience and pre-test knowledge among staff nurses.

Table 5: shows association between experience and post-test knowledge

ASSOCIATION BETWEEN EXPERINCE AND POST -TEST KNOWLEDGE					
EXPERIENCE	Inadequate		Adequate		Chi – square ' χ^2 ' Value
	n	%	n	%	
≥ 6month	10	12%	60	72%	**14.41**
< 6month	8	10%	5	6%	
p< 0.05					

The chi-square statistic was 14.41. The p-value was 0.000147. The result was statistically significant at $p < 0.05$. There was significant association between experience and post-test knowledge among staff nurses

DISCUSSION:

Study findings revealed that majority of the staff nurses 52 (63%) had inadequate knowledge and 31 (37%) regarding Braden Scale Assessment.The study revealed that exposure to structured teaching programme had caused significant difference in knowledge ('t' value 17.58) level among staff nurses.

The findings were supported by the study done by Mallah Z, Nassar N, Kurdahi Badr L :

"The effectiveness of a pressure ulcer intervention program on the prevalence of hospital acquired pressure ulcers: controlled before and after study"

[Appl Nurs Res. 2015 May;28(2):106-13. doi: 10.1016/ j.apnr. 2014.07.001. Epub 2014 Jul 26]

The prevalence of HAPU was significantly reduced from 6.63% in 2012 to 2.47. Sensitivity of the Braden scale in predicting a HAPU was 92.30% and specificity was 60.04%. A logistic multiple regression equation found that two factors significantly predicted the development of a HAPU; skin care and Braden scores.

Pressure ulcers are common and have been reported in up to 1 in 5 patients in both developed and developing countries, with effective preventative care they are considered largely avoidable.

Cost is high on pressure ulcer management. Given the economic and humanitarian burden, pressure ulcers are increasingly becoming the focus of quality and safety initiatives, with some healthcare systems imposing severe punitive measures on healthcare providers if ulcers occur within a supervised facility

IMPLICATION:

The implications of the findings had been discussed in relation to nursing service, nursing education, nursing administration and nursing research. Nursing Educators can plan different bed side teaching /classroom training modules covering various aspects of PU.

Nurse Managers can use the Research Tool as Audit tool to know the status of the HAPU and can formulate SOP for JCI / NABH Accreditation. Nurse researcher can take up similar study in different aspects of PU - like prevention of Heel PU.

CONCLUSION:

The study findings conclude that an exposure to a good structured teaching programme on Braden Scale Assessment could improve the knowledge of the staff nurses to score Braden Scale correctly, inspite it was implemented in Nursing Assessment chart. The condition of the risk status can be track down and recorded by the staff nurses to plan nursing implementation.

Further, hospital could present an accurate data related to risk development of PU so that effective strategy could be formulated and standard operating protocols can be filed. This in turn will benefit the hospital to face any kind of challenges of PU specially in correlation with accreditation programme like NABH, Nursing Excellence, JCI.

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