



## “A study to evaluate the effectiveness of structured teaching programme on knowledge regarding use of Braden scale among student nurses in selected colleges of Indore ” .

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**Abstract** :A quasi experimental One group pre-test post-test study to assess the effectiveness of structured teaching programme regarding use of braden scale among student nurses in selected nursing college at Indore. by using simple random sampling technique method. The tool comprised of by using structured knowledge questionnaire. The pretest was conducted and the structured teaching programme was administered. The post test was conducted after one week .The data obtained were analyzed by using differential and inferential statistics. the mean post-test knowledge score is 36.10 was greater than the mean pre-test knowledge scores 20.50. The enhancement in the knowledge level of respondents is 15.60 indicates gain in knowledge by respondents.

**Key words** – One group pre –test post –test quasi experimental study, student nurses, Braden Scale and simple random sampling..

### I. Introduction

Decubitus ulcer is a great burden to entire world; it is the second most common problem after hospital acquired infection during hospitalization of patient. It is generalized and very common health related sigma everywhere with the incidence ranges from 5-7 to 24 percent globally. The annual expenditure of its treatment and related management cost 100- 132 billion per year in countries of Asia. Bed sore is mainly caused by prolonged generated pressure over the soft tissue which disrupts blood supply to the specific as well nearby area especially on bony prominences which leads to ischemia, necrosis and death of tissue and covert into wound which is hard to manage. From ancient eras there were a significant evidences were achieved regarding pressure sore and its remedial measure. However, despite the increasing expenditure on pressure ulcer prevention, pressure ulcers remain a major health care problem. Nurses plays a major role in care of all the patient s specially sick and vulnerable client and as a pressure sore is a preventable health issue therefore our first cadre of nuses that means student nurses if trained and educated well than this concept of assessment and interpretation will completely opt by entire nurses as a part of educational policy and skill, so it ultimately decrease the national budget pressure and become one of the powerful weapon towards pressure sore prevention Although nurses do not have the sole responsibility for pressure ulcer prevention, nurses have a unique opportunity to have a significant impact on this problem.<sup>1</sup>. A pressure ulcer starts as reddened skin but gets progressively worse, forming a blister, then an open sore and finally a crater. <sup>4</sup> The Braden scale is a screening tool that is designed to identify patients who might develop a pressure sore. The Agency for Health care Policy and Research [AHCPR] recommends that the patients who are bed fast or chair fast who cannot reposition themselves should be assessed for factors that increase risk of developing pressure ulcers. The pressure ulcer risk assessment scale should be used for all patients who are in critical care unit and other who are high risk for getting low score on Braden scale.<sup>10</sup>

### II Research Elaborations

#### Statement of problem –

“A study to evaluate the effectiveness of structured teaching programme on knowledge regarding use of Braden scale among student nurses in selected colleges at Indore” .

### III. Objectives

1. To assess the knowledge of student nurses on use of Braden scale.
2. To evaluate the effectiveness of structured teaching programme on use of Braden scale among student nurses.
3. To find out the association between pre-test knowledge score with selected socio-demographic variables of staff nurses

### IV. Hypothesis

**H1:** There will be significant difference between pre-test and post-test knowledge score regarding use of Braden scale among student nurses.

**H2:** There will be significant association between pre-test knowledge score with selected socio demographic variables.

## V. Materials and Methods

Population – Student Nurses

Sample- Student Nurses studying different college of Indore .

Sample Size – 50 student nurses

Sampling Technique-Simple random sampling.

Setting –Kewal Shree Institute of Nursing, Indore, Madhya Pradesh, India

The conceptual framework for the present study is based on CIPP Model

## VI. Research Design

The research design selected for the present study was a one group pre-test post-test research design

PRE-TEST	TREATMENT	POST –TEST
RO1	X	RO2
Knowledge of Student Nurses.	Structured Teaching Programme	Knowledge of Student Nurses.

**Table 1** :Quasi experimental one group pre and post-test research design

The interpretations of the symbol are as below:

RO1 = Assessment of knowledge by pre-test.

X = **Structured teaching programme** on use of Braden scale among student nurses

RO2 = Assessment of knowledge by post-test.

### Ethical Consideration

After obtaining permission from research committee of Shubhdeep College of Nursing ,prior permission was obtained from principal kewal Shree Institute of Nursing, Indore , India.Consent was taken from each participant who had participated in the study.

### Description of the Tool

The structured knowledge questionnaire consisted of two parts i.e .Part –I & II .

**Part I:** Consist of selected socio-demographic variables like age, sex, professional qualification, previous knowledge on use of Braden scale.

**Part II:** Consist of structured knowledge questionnaire on use of the Braden scale. It consists of 40 items which were divided into 8 parts. Each correct answer was given a score of one and the wrong answer, zero. The maximum score for the structured questionnaire was 40.

1. Introduction of Pressure sore
2. Introduction of Braden scale and its content
  - I. Sensory perception
  - II. Moisture
  - III. Activity
  - IV. Mobility
  - V. Nutrition
  - VI. Friction and shear.

### Data Collection And Data Analysis

The data was presented under the following sections

**Section I:** Description of socio-demographic variables of Respondents.

**Section II:** Findings related to area wise knowledge scores of respondents regarding use of braden scale among student nurses.

**Section III:** Findings related to association between pre-test knowledge score with selected socio-demographic variables of student nurses.

## VII.Result

**Table 2:** Area wise pre-test knowledge score of respondents on use of braden scale among staff nurses .

N=50

Aspect wise analysis of pretest knowledge on Braden scale	Max. score	Mean	SD	Mean %
Pressure Sore	4	2.76	0.85	69.00
Braden scale and its contents	6	1.86	1.18	31.00
Sensory perception	5	3.26	1.41	65.20
Moisture	5	2.26	1.27	45.20
Activity	4	1.42	1.07	35.50
Mobility	4	2.66	1.12	66.50
Nutrition	5	2.24	1.13	44.80
Friction /Shear	7	4.08	1.47	58.29
Overall pre-test knowledge on Braden scale	40	20.50	4.82	51.25

**Table 2:** Area wise analysis showed that during pre-test, the subjects had a maximum mean of 2.76 with a standard deviation of 0.85 and mean percentage of 69.00% regarding pressure sore. The mean score of 1.86 with standard deviation of 1.18 and mean percentage of 31.00% regarding introduction to Braden scale and its contents. The subjects obtained score of 3.26 with standard deviation of 1.41 with mean percentage of 65.20% for sensory perception. The mean knowledge on moisture is 2.26 with and standard deviation of 1.27 has mean percentage of 45.00%. The mean knowledge on activity is 1.42 with standard deviation of 1.07 and has mean percentage of 35.50%, where as for mobility the respective values are found to be 2.66, 1.12 and 66.50%. The mean for nutrition is 2.24 with a standard deviation of 1.13 with a mean percentage of 44.80%. The friction and shear has mean score of 4.08 and a standard deviation of 1.47 whose mean percentage is 58.29%. However, the overall mean knowledge score is found to be 20.50 with a standard deviation of 4.82. The overall mean percentage of knowledge score is 51.25%.

**Table 3:** Area wise post-test knowledge score of respondents on use of of braden scale among student nurses

N=50

Aspect wise analysis of post-test knowledge on Braden scale	Max. score	Mean	SD	Mean %
Pressure Sore	4	3.86	0.40	96.50
Braden scale and its contents	6	5.88	0.33	98.00
Sensory perception	5	4.66	0.56	93.20
Moisture	5	4.30	0.81	86.00
Activity	4	3.20	0.90	80.00
Mobility	4	3.22	0.89	80.50
Nutrition	5	4.50	0.65	90.00
Friction /Shear	7	6.48	0.65	92.57
Overall post-test knowledge on Braden scale	40	36.10	1.91	90.25

**Table 3:** Dispicited area wise analysis shows the subjects had a maximum mean of 3.86 with a standard deviation of 0.40 and mean percentage of 96.50% regarding pressure sore. The mean of 5.88 with standard deviation of 0.33 and mean percentage of 98.00% regarding introduction to Braden scale ant its contents. The subjects obtained score of 4.66 with standard deviation of 0.56 with mean percentage of 93.20% for sensory perception. The mean knowledge on moisture is 4.30 with and standard deviation of 0.81 has mean percentage of 86.00%. The mean knowledge on activity is 3.20 with standard deviation of 0.90 and has mean percentage of 80.00%, where as for mobility the respective values are found to be 3.22, 0.89 and 80.50%. The mean for nutrition is 4.50 with a standard deviation of 0.65 with a mean percentage of 90.00%. The friction and shear has mean score of 6.48 and a standard deviation of 0.65 whose mean percentage is 92.57%. However, the overall mean knowledge score is found to be 36.10 with a standard deviation of 1.91. The overall mean percentage of knowledge score is 90.25%.

**Table 4:** Comparison of pre-test and post-test knowledge score using Student's paired t-test

Aspect wise analysis	Pre-test		Post-test		t-value
	Mean	SD	Mean	SD	
Pressure Sore	2.76	0.85	3.86	0.40	8.556
Braden scale and its contents	1.86	1.18	5.88	0.33	22.112
Sensory perception	3.26	1.41	4.66	0.56	6.548
Moisture	2.26	1.27	4.30	0.81	9.545
Activity	1.42	1.07	3.20	0.90	9.361
Mobility	2.66	1.12	3.22	0.89	2.917
Nutrition	2.24	1.13	4.50	0.65	11.440
Friction /Shear	4.08	1.47	6.48	0.65	10.583
Overall knowledge on Braden scale	20.50	4.82	36.10	1.91	19.767

**Table 4:** Depicted that the pre-test and post-test knowledge level of staff nurses regarding use of braden scale. The result showed that the aspect of pressure sore the Mean  $\pm$  SD during the pre-test is found to be  $2.76 \pm 0.85$  where as during post-test it is  $3.86 \pm 0.40$ . There is an increase of 23.68% of knowledge which is statistically highly significant ( $P < 0.001$ ). In the aspect of Introduction to Braden scale and its contents the Mean  $\pm$  SD during the pre-test is  $1.86 \pm 1.18$  and in the post-test it is  $5.88 \pm 0.33$  which has an increase of 26.36% of knowledge is statistically highly significant ( $P < 0.001$ ). The sensory perception aspect in the pre-test has a Mean  $\pm$  SD of  $3.26 \pm 1.41$  and in the post-test it is  $4.66 \pm 0.56$  with an increase in 25.68%. This increase in percentage of knowledge from pre-test to post-test is found to be statistically highly significant ( $P < 0.001$ ). In the moisture aspect during the pre-test has a Mean  $\pm$  SD of  $2.26 \pm 1.27$  and in the post-test it is  $4.30 \pm 0.81$  with an increase in 23.48%. This increase in percentage of knowledge from pre-test to post-test is found to be statistically highly significant ( $P < 0.001$ ). As for the activity aspect is concerned in the knowledge area during the pre-test Mean  $\pm$  SD is  $1.42 \pm 1.07$  and in the post-test it is  $3.20 \pm 0.90$  with an increase in 29.02%, where as in the area of mobility Mean  $\pm$  SD is found to be  $2.66 \pm 1.12$  during pre-test and  $3.22 \pm 0.89$  during post-test with an increase in percentage of knowledge of 22.90% from pretest to post-test. Both in the knowledge of activity and mobility there is an increase in the knowledge score from pre-test to post-test which is found to be statistically highly significant ( $P < 0.001$ ). In the nutrition aspect during the pre-test has a Mean  $\pm$  SD of  $2.24 \pm 1.33$  and in the post-test it is  $4.50 \pm 0.65$  with an increase in 34.03%. This increase in percentage of knowledge from pre-test to post-test is found to be statistically highly significant ( $P < 0.001$ ).

**Table 5:** Effectiveness of structured teaching programme on knowledge regarding braden scale among staff nurses

N=50

S. No.	Knowledge assessment	Sample Size	Mean	SD	't' Value
1	Pre test	50	20.50	4.82	19.767*
2	Post test	50	36.10	1.91	

**Table 5:** The result showed that total mean knowledge scores in pre test were 20.50 and increased to 36.10. So it is evident that mean post test knowledge scores of participants are significantly higher than their mean pre test knowledge scores. The paired' test value

is 19.767\* which is significant at 5 percent level. Hence the research hypothesis  $H_1$  was accepted. These finding revealed that structured teaching programme was effective in increasing the knowledge of student nurses regarding use of Braden scale.

**$H_1$**  - There will be significant difference between pre-test and post-test knowledge score regarding use of Braden scale among student nurses

**$H_2$** : There is a significant association between pre-test knowledge score with selected socio demographic variables of student nurses

The Chi-square test was carried out to determine the association between the pre-test knowledge and socio-demographic variables such as age, sex, professional qualification, previous knowledge on use of Braden scale, with the level of knowledge is statistically not significant which indicates that there is no association between the knowledge score and the demographic variables in relation to the knowledge before STP. Hence research hypothesis  $H_2$  was rejected.

### VIII. Conclusion

The overall comparison of pre and post-test knowledge scores on use of Braden scale among student nurses shows that the mean post-test knowledge score is 36.10 was greater than the mean pre-test knowledge scores 20.52. The enhancement in the knowledge level of respondents is 15.60 indicates gain in knowledge by respondents. The data further represent that the t value 19.76 was significantly higher than the table value 12.71 at 0.05 level of significance. This indicates that there was significant difference in pre-test and post-test knowledge score of respondents and that the structured teaching programme was effective in improving the knowledge level of student nurses on use of Braden scale.

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