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Effectiveness Of Planned Teaching Program on The Knowledge and Practice Regarding Pressure Point Care Among IIIrd And Vth Semester Students of College of Nursing, Synod Hospital, Durtlang

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Abstract:
Background: *Pressure ulcers are a significant concern for hospitalized patients. Nurses' knowledge and practical skills play an important role in detecting, preventing, and effectively treating these ulcers.*
Materials and methods: *The study used a pre-experimental one-group pre-test/post-test design. The sample consisted of 41 IIIrd and Vth semester students chosen using the stratified random selection technique. A structured knowledge questionnaire and a pressure point care observation checklist were used to evaluate knowledge and practice of pressure point care, respectively.*
Results: *The pre-test results suggested that the majority, 43.9%, had moderate knowledge, while the majority, 85.4%, had acceptable knowledge. Pre-test findings showed that the majority, 53.7%, practiced moderately, but the majority, 87.8%, practiced adequately after the exam. The paired t-test results for knowledge (t=35) and practice (t=26.3) are statistically significant at the 0.05 level of significance. There is a moderate link between knowledge and practice (r = 0.89). The semester and number of pressure point care procedures conducted on patients were found to be statistically significant in both knowledge and practice.*
Conclusion: *The findings revealed a significant increase in knowledge and practice; a correlation between knowledge and practice; and a relationship between knowledge and practice and demographic variables such as semester and number of pressure point treatment procedures conducted on patients.*
Key Word*: Assess, Effectiveness, Knowledge, Practice, Pressure point care, IIIrd and Vth semester students*

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I. Introduction

Localized damage to the skin and underlying soft tissue, typically over a bony prominence or associated with a medical or other device is known as a pressure ulcer or decubitus ulcer. The injury may be painful and manifest as an open ulcer or intact. Intense, continuous pressure combined with shear, or both can cause the injury. Soft tissue condition, co-morbidities, nutrition, perfusion, and microlite can have an impact on how well soft tissue tolerates pressure and shear.[1]

Pressure point care refers to the application of gentle, targeted pressure to specific areas of the body to alleviate discomfort, pain and prevent formation of pressure ulcers. It can be in the form of the pressure reducing mattress, pressure cushions and pressure gel pads. Changing of positions, moisturizing and rubbing of the skin regularly play an important part in prevention of pressure ulcers.[2]

Nurses must receive regular training in pressure ulcer prevention since a lack of knowledge and skills in this area can increase or worsen the risk of developing pressure ulcers.[3] In addition to improving pressure treatment, raising nurses' expertise of pressure ulcer prevention reduces hospital stays and the number of patients with pressure ulcers.[4]Knowledge of pressure ulcer prevention helps nurses better select which patients should receive prevention, what prevention should be done, and how prevention should be applied.[5]

Objectives

1. To assess the existing knowledge regarding pressure point care among IIIrd and Vth semester students of CONSH Durtlang.
2. To determine the existing practice regarding pressure point care among IIIrd and Vth semester students of CONSH, Durtlang.

3. To evaluate the effectiveness of planned teaching program on the knowledge and practice regarding pressure point care among IIIrd and Vth semester students of CONSH, Durtlang.
4. To find out correlation between knowledge and practice regarding pressure point care.
5. To identify association between knowledge regarding pressure point care and selected demographic variables.
6. To find out association between practice regarding pressure point care and selected demographic variables.

Hypotheses

H_1: There is a significant difference in knowledge and practice scores regarding pressure point care before and after the planned teaching is implemented.

H_2: There is a significant correlation between knowledge and practice regarding pressure point care.

H_3: There is a significant association between knowledge regarding pressure point care and selected demographic variables.

H_4: There is a significant association between practice regarding pressure point care and selected demographic variables.

Projected outcome

1. The study will reveal the existing knowledge and practice regarding pressure point care.
2. The study will improve knowledge and practice regarding pressure point care among the students.

II. Material And Methods

Research Approach: Quantitaive research approach
Research Design: Pre experimental one group pre-test post-test design
Study Setting: The study was conducted at Synod Hospital, Durtlang, Aizawl, Mizoram
Study Duration: One week
Sample Size: 41 students
Sample Technique: Stratified random sampling technique

Sampling Criteria:
Inclusion criteria:

1. IIIrd and Vth semester students of College of Nursing, Synod Hospital, Durtlang.
2. IIIrd and Vth semester students who are willing to participate.

Exclusion criteria:

1. Students of College of Nursing, Synod Hospital, who are in the Ist, IInd, IVth, VIth, VIIth and VIIIth semester.
2. Students who are not cooperative.
3. IIIrd and Vth semester students who are not available during main study.

Description of tools

The tools consisted of 3 parts

- Part I – Demographic Performa

The demographic characteristics in the performa include age, gender, semester, number of pressure point care performed on patients and history of encountering pressure ulcer.

- Part II – Structured Knowledge Questionnaire

The structured questionnaire consists of 26 items on; pressure point care, its purpose, and complication pertaining to poor practice.

- Part III – Pressure Point Care Observation Checklist

The observation checklist consists of 26 steps of procedure of pressure point care which are divided into three main parts- preparation of client, procedure performed and after care.

Procedure of data collection

1. Permission for conducting the study was obtained from ward in-charge of selected wards, Synod Hospital, Durtlang.
2. Verbal consent was obtained from all the participants of the study following explanation of the purpose and details of the study.
3. Data collection was done for 7 days.
4. Data was collected from 5-6 samples a day and around 1 hour was needed in completing data collection.
5. Knowledge and practice regarding pressure point care were assessed using structured knowledge questionnaire and pressure point care observation checklist respectively followed by health education.
6. Post education knowledge and practice were then collected.

Statistical analysis

Data was analyzed based on the objectives of the study. Analysis was done using descriptive and inferential statistics. Analysis was done under 7 sections.

Section - I: Demographic variables of IIIrd and Vth semester students in terms of frequency and percentages.

Section - II: Assessment of knowledge regarding pressure point care among IIIrd and Vth semester students before and after implementing planned teaching program in terms of frequency and percentages.

Section - III: Assessment of practice regarding pressure point care among IIIrd and Vth semester students before and after implementing planned teaching program in terms of frequency and percentages.

Section - IV: Determination of effectiveness of planned teaching program on the knowledge and practice regarding pressure point care among IIIrd and Vth semester students using paired t-test.

Section - V: Determination of correlation between knowledge and practice regarding pressure point care before implementing planned teaching program using Karl Pearson's correlation coefficient.

Section - VI: Association between knowledge regarding pressure point care before implementing planned teaching program with selected demographic variables using chi square test of independence.

Section - VII: Association between practice regarding pressure point care before implementing planned teaching program with selected demographic variables using chi square test of independence.

III. Result

Section I: Demographic variables of IIIrd and Vth semester students in terms of frequency and percentages

Table 1: Frequency and percentage distribution of IIIrd and Vth semester students according to their demographic variables

Demographic variables	*Group*	*Frequency (f)*	*Percentage (%)*
Age	a. <20 years	9	22.0%
	b. 20-22 years	26	63.4%
	c. >22 years	6	14.6%
Gender	a. Male	2	4.90%
	b. Female	39	95.10%
Semester	a. IIIrd semester	20	48.8%
	b. Vrd semester	21	51.2%
Number of pressure point care procedure performed on patient	a. <10 times	7	17.1%
	b. 10-20 times	19	46.3%
	c. >20 times	15	36.6%
History of encountering pressure ulcer	a. Yes	41	100%
	b. No	-	-

Out of 41 IIIrd and Vth semester students, with regards to age, majority 26 (63.4%) were 20-22 years old. With regards to gender, majority 39 (95.10%) were female. With regards to semester, majority 21 (51.2%) were Vth semester. In terms of number of pressure point care procedure performed on patient, majority 19 (46.3%) had performed the procedure 10-20 times and with regards to history of encountering pressure, all 41 (100%) of the students had encountered pressure ulcer

Section - II: Assessment of knowledge regarding pressure point care among IIIrd and Vth semester students before and after implementing planned teaching program in terms of frequency and percentages

Table 2: Frequency and percentage distribution of knowledge regarding pressure point care before and after planned teaching was implemented

Knowledge	*Before*		*After*	
	f	*%*	*f*	*%*
Inadequate knowledge	7	17.1%	-	-
Moderate knowledge	18	43.9%	6	14.6%
Adequate knowledge	16	33%	35	85.4%

In pre-test, majority i.e. 18 (43.9%) had moderate knowledge, 16 (33%) had adequate knowledge and 7 (17.1%) had inadequate knowledge. Whereas in post-test, majority i.e. 35 (85.4%) had adequate knowledge, 6 (14.6%) had moderate knowledge and none of the students had inadequate knowledge.

Section - III: Assessment of practice regarding pressure point care among IIIrd and Vth semester students before and after implementing planned teaching program in terms of frequency and percentages

Table 3: Frequency and percentage distribution of practice regarding pressure point care before and after planned teaching was implemented

Practice	*Before*		*After*	
	f	*%*	*f*	*%*
Inadequate practice	3	7.3%	-	-
Moderate practice	22	53.7%	5	12.2%
Adequate practice	16	39.0%	36	87.8%

In pre-test, majority i.e. 22 (53.7%) had moderate practice, 16 (39%) had adequate practice and 3 (7.3%) had inadequate practice. Whereas in post-test, majority i.e. 36 (87.8%) had adequate practice, 5 (12.2%) had moderate practice and none of the students had inadequate practice.

Section - IV: Determination of effectiveness of planned teaching program on the knowledge and practice regarding pressure point care among IIIrd and Vth semester students using paired t-test

Table 4.1: Effectiveness of planned teaching program on the knowledge regarding pressure point care among IIIrd and Vth semester students

Knowledge	*Mean*	*SD*	*Mean difference*	*df*	*t-test value*	*tab value*	*p value*	*Remarks*
Before	14.7	4.4	6.1	40	35.8	2.02	0.0001	S
After	20.8	2.7						

The obtained t-test value (t=35.8) was larger than the tabulated value (t=2.02) which is statistically significant at 0.05 level of significance.

Table 4.2: Effectiveness of planned teaching program on the knowledge regarding pressure point care among IIIrd and Vth semester students

Practice	*Mean*	*SD*	*Mean difference*	*df*	*t-test value*	*tab value*	*p value*	*Remarks*
Before	15.6	3.5	5.8	40	26.3	2.02	0.0001	S
After	21.7	2.6						

The obtained t-test value (t=26.3) was larger than the tabulated value (t=2.02) which is statistically significant at 0.05 level of significance.

Findings reveals that there is a significant difference in the knowledge and practice scores regarding pressure point care among IIIrd and Vth semester students before and after planned teaching was implemented. Hence hypothesis H_1 which stated that there is a significant difference in the knowledge and practice scores regarding pressure point care before and after the planned teaching is implemented was accepted.

Section - V: Determination of correlation between knowledge and practice regarding pressure point care before implementing planned teaching program using Karl Pearson's correlation coefficient

Table 5: Correlation between knowledge and practice regarding pressure point care among IIIrd and Vth semester students before planned teaching was implemented

Correlation	*Mean*	*SD*	*r value*	*p value*	*Remarks*
Knowledge	14.7	3.5	0.89	0.0001	S
Practice	15.6	4.4			

There is a moderately positive correlation (p=0.0001) between knowledge and practice regarding pressure point care. Therefore hypothesis H_2 which stated that there is a significant correlation between knowledge and practice regarding pressure point care was accepted.

Section - VI: Association between knowledge regarding pressure point care before implementing planned teaching program with selected demographic variables using chi square test of independence

Table 6: Association between knowledge regarding pressure point care among III[rd] and V[th] semester students before planned teaching was implemented with selected demographic variables

Demographic variables	*Group*	*Adequacy of knowledge*				*df*	χ^2	*tab value*	*p value*	*Remarks*
		Inadequate	*Moderate*	*Adequate*	*Total*					
Age	a.<20 years b.20-22 years c.>20 years	3 3 1	6 10 2	0 13 3	9 26 6	4	7.74	9.49	0.10	NS
Gender	a.Male b.Female	0 7	1 17	1 15	2 39	2	0.42	5.99	0.81	NS
Semester	a.III[rd] Semester b.V[th] Semester	6 1	11 7	3 13	20 21	2	10.67	5.99	0.004	S
Number of pressure point care procedure performed on patient	a.<10 times b.10-20 times c.>20 times	5 2 0	2 13 3	0 4 12	7 19 15	4	13.88	9.49	0.0001	S
History of encountering pressure ulcer	a.Yes b.No	7 -	18 -	16 -	41 -	2	0	5.99	1	NS

Findings shows that there was significant association between the knowledge regarding pressure point care among III[rd] and V[th] semester students before implementing planned teaching with their semester (χ^2 =10.67) and number of pressure point care procedure performed on patient (χ^2 =30.88) at 0.05 level of significance. In the contrary, there was no association between the knowledge regarding pressure point care among III[rd] and V[th] semester students before implementing planned teaching with their age, gender and history of encountering pressure ulcer. Thus, the research hypothesis H_3 which stated that there is a significant association between knowledge regarding pressure point care and selected demographic variables was accepted with regards to semester and number of pressure point care procedure performed on patient. Hypothesis H_3 was rejected for demographic variables such as age, gender and history of encountering pressure ulcer.

Section - VII: Association between practice regarding pressure point care before implementing planned teaching program with selected demographic variables using chi square test of independence

Table 6: Association between practice regarding pressure point care among III[rd] and V[th] semester students before planned teaching was implemented with selected demographic variables

Demographic variables	*Group*	*Adequacy of practice*				*df*	χ^2	*tab value*	*p value*	*Remarks*
		Inadequate	*Moderate*	*Adequate*	*Total*					
Age	a.<20 years b.20-22 years c.>20 years	1 1 1	7 13 2	1 12 3	9 26 6	4	4.87	9.49	0.30	NS
Gender	a.Male b.Female	0 3	2 20	0 16	2 39	2	0.88	5.99	0.64	NS
Semester	a.III[rd] Semester b.V[th] Semester	3 0	13 9	4 22	20 21	2	7.63	5.99	0.02	S
Number of pressure point care procedure performed on patient	a.<10 times b.10-20 times c.>20 times	3 0 0	4 17 1	0 2 14	7 19 15	4	43.2	9.49	0.0001	S
History of encountering pressure ulcer	a.Yes b.No	3 -	22 -	16 -	41 -	2	0	5.99	1	NS

Findings showed that there was significant association between the practice regarding pressure point care among III[rd] and V[th] semester students before implementing planned teaching with their semester (χ^2 = 7.62) and number of pressure point care procedure performed on patient (χ^2=43.2) at 0.05 level of significance. In the contrary, there was no association between the practice regarding pressure point care among III[rd] and V[th] semester students before implementing planned teaching with their age, gender and history of encountering pressure ulcer. Thus, the research hypothesis H_4 which stated that there is a significant association between practice regarding

pressure point care and selected demographic variables was accepted with regards to semester and number of pressure point care procedure performed on patient. Hypothesis H_4 was rejected for demographic variables such as age, gender and history of encountering pressure ulcer.

IV. Discussion

The present study revealed that out of 41 students, majority i.e. 43.9% students had moderate knowledge, 33% students had adequate knowledge and the remaining 17.1% students had inadequate knowledge before planned teaching was implemented. Whereas after planned teaching was implemented, majority i.e. 85.4% students had adequate knowledge, 14.6% students had moderate knowledge and there are no students who had inadequate knowledge. Similar findings were seen in a study conducted by Anjalatchi (2021), results revealed that in pre-test knowledge scores, out of 50 samples, majority i.e. 29(58%) of the students had moderate knowledge, followed by 16(32%) students had adequate knowledge and the remaining 5(10%) students had inadequate knowledge. After structured teaching was implemented, majority i.e. 32(64%) had adequate knowledge, 18(36%) had moderate knowledge and no student was found to have inadequate knowledge regarding prevention of pressure ulcer.[6]

The present study result revealed that out of 41 students, majority i.e. 22 (53.7%) students had moderate practice, 16 (39.0%) students had adequate practice and the remaining 3 (7.3%) students had inadequate practice before planned teaching was implemented. Whereas after planned teaching was implemented, majority i.e. 36 (87.8%) students had adequate practice, 5 (12.2%) students had moderate practice and there are no students who had inadequate practice. But, study conducted by Sen. S (2020) revealed that majority i.e. 82.6% of nurses have inadequate practices, 7.1% have moderate practices and 10.3% have adequate practices of pressure ulcer prevention.[7]

The present study revealed that before planned teaching was implemented, The obtained t-test value (t=35.8) for knowledge and t-test value (t=26.3) for practice were larger than the tabulated value (t=2.02) and hence found to be statistically significant at 0.05 level of significance. Similar findings were seen in a study conducted by Anjalatchi (2021), paired t test was computed to assess the mean difference in pre-test and post-test knowledge scores and the calculated t value was 10.62 (df=49) with corresponding p value <0.02 which was statistically significant at 0.05 level of significance and thus, there is a significant effect of structured teaching programme on the knowledge scores regarding prevention of pressure ulcer.[6]

A moderate positive correlation was found between knowledge and practice regarding pressure point care that is statistically significant (r=0.89, p=0.0001). A study conducted by Pangambam, S. et al. (2021) showed similar findings that there is a moderate positive correlation between knowledge and practice regarding pressure point care (r=0.79, p=0.00001).[8] However, in a study conducted by Niyongabo, E. et al. (2022), there was no significant correlation between knowledge and practice regarding pressure point care (r = 0.304, p = 0.140).[9]

The present study showed a significant association between the knowledge regarding pressure point care among before implementing planned teaching with their semester (p=0.004) and number of pressure point care procedure performed on patient (p=0.0001). In the contrary, there was no association between the knowledge regarding pressure point care before implementing planned teaching with their age (p=0.10), gender (p=0.81) and history of encountering pressure ulcer (p=1). In contrast, a study conducted by Pangambam, S. et al. (2021) revealed that there was an association between knowledge regarding prevention of pressure ulcer among nurses with year of experience (p=0.05).[8] However, in a study conducted by Abrahams, F. R. et al. (2023), there was no statistically significant association between demographic variables and the level of knowledge regarding prevention of pressure ulcer among nursing students.[10]

The present study showed that a significant association between the practice regarding pressure point care before implementing planned teaching with their semester (p=0.02) and number of pressure point care procedure performed on patient (p=0.0001). In the contrary, there was no association between the practice regarding pressure point care before implementing planned teaching with their age (p=0.30), gender (p=0.64) and history of encountering pressure ulcer (p=1). In contrast a study conducted by Pangambam, S. et al. (2021) revealed that there was an association between practice regarding prevention of pressure ulcer among nurses with area of posting (p=1)[8].However, in a study conducted by Abrahams, F. R. et al. (2023), there was no statistically significant association between demographic variables and the level of practice regarding prevention of pressure ulcer among nursing students.[10]

V. Conclusion

The findings revealed that there is a significant increase in knowledge and practice; correlation between knowledge and practice; association between knowledge and practice with demographic variables such as semester and number of pressure point care procedure performed on patient.

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