

Effectiveness of Workshop Based Teaching on Knowledge Regarding Diversion Procedure and Stoma Care

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Abstract

Background of the Study: In the current scenario people suffer from diseases resulting from unhealthy lifestyle practices, environment and unhealthy food habits. Many Intestinal and urinary condition need surgical intervention called as diversion technique. Intestinal diversion technique use to reroute the intestinal content, urinary diversion is to reroute the urine output through an artificial stoma. According to research study it's estimated that around 6,400 permanent colostomies are carried out each year in UK. *Objectives:* 1. To assess the pretest and posttest level of knowledge regarding diversion procedure and stoma care among B.Sc. nursing student. 2. To evaluate the effectiveness of workshop based teaching on level of knowledge regarding diversion procedure and stoma care among B.Sc. nursing student. *Methodology:* An experimental quantitative approach was used to achieve the objectives of the study. The study was conducted in Padmashree institute of nursing, Bengaluru, The sample size was 29. *Result:* Findings shows the outcome of paired t test on knowledge scores and statistical significance. Out of maximum score 24, mean was 10.06, SD was 3.34, Mean % was 41.91, and paired t test value found as 16.20, which was found to be significant at 0.05 level. *Conclusion:* The study concludes that majority of the student gained adequate knowledge regarding diversion procedure and stoma care after the workshop based teaching. It proves that the workshop based teaching was effective in improving the knowledge among the B.Sc. nursing students.

Keywords: Knowledge; Diversion Procedure; Stoma Care; Workshop Based Teaching.

Introduction

Urinary diversion is any one of several surgical procedures to reroute urine flow from its normal pathway. It may be necessary for diseased or defective ureters, bladder or urethra, either temporarily or permanently. Some diversions result in a stoma [1].

In current clinical practice continent urinary diversion is being used world-wide in patients

undergoing radical cystectomy and in severe cases of benign bladder pathologies. We also discuss the specific complications of continent urinary diversion and highlight the need to rigorously monitor these patients in the long- term specifically in terms of their renal function and cancer recurrence [2].

In the majority of cases, urinary diversion is performed after cystectomy to treat high-risk nonmuscle invasive bladder cancer after failure of intravesical therapy or to treat muscle invasive bladder cancer. Urinary diversions can be divided in noncontinent diversions, continent diversions, and orthotopic neobladders. Currently, the majority of urinary diversions are constructed from terminal ileum or ileocolonic segments of the intestine. Urologists who perform urinary diversions should not only be familiar with surgical techniques to create these diversions but should also be aware of metabolic changes that arise when intestinal segments are used to divert or to store urine. Many patients have a long life expectancy, even after oncological surgery with urinary diversion [3].

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Ileal conduit is the most common surgical procedure performed for individuals after surgical removal of the bladder for severe trauma or malignancy, a congenital defect of the urinary tract, and neurogenic non-functioning bladder in which other methods to maintain urinary flow are unsatisfactory. This urinary diversion being permanent, knowledge and skill in the self care and rehabilitation is very important. The present one group pretest-posttest study on "Effectiveness of a self-instructional module on knowledge regarding rehabilitation among patients with ileal conduit" conducted through telephonic interview among 30 patients selected by purposive sampling showed a statistically significant improvement in knowledge regarding rehabilitation ($t(29) = 16.279, p < 0.05$ [4].

Study report says that Stomal complications associated with ileal conduit urinary diversion are not uncommon and occur in almost 15% of patients, with the most common problem being parastomal hernia. Evaluation of possible risk factors demonstrates that obesity may be a contributing factor in the development of stomal complications, particularly in the elderly. Furthermore, our

experience suggests that subsequent repairs of parastomal hernias are only moderately successful⁵.

Material and Methods

This chapter deals with description of methodology and different steps which are undertaken for collection and organization of data for investigation.

Research Approach

Quantitative research approach was considered the most appropriate for the study, as the aim of the study was to find out the level of knowledge regarding diversion procedure and stoma care among B.Sc. nursing student.

Research Design

The design adopted for the study was a pre-experimental one group pre-test and post-test design.

Pre-test (O ₁)	Intervention (X)	Post-test (O ₂)
Assess the pre-test level of knowledge by using structured knowledge questionnaire regarding diversion procedure and stoma care among B.Sc. nursing student.	Workshop based teaching was administered regarding diversion procedure and stoma care among B.Sc. nursing student.	Assess the post-test level of knowledge was assessed by using structured knowledge questionnaire regarding diversion procedure and stoma care among B.Sc. nursing student.

Research Variables

Independent Variables: Workshop based teaching on diversion procedure and stoma care among B.Sc. nursing student.

Dependent Variables

Knowledge regarding diversion procedure and stoma care among B.Sc. nursing student.

Settings

The study was conducted in Padmashree Institute of Nursing, kengeri, Bengaluru.

Population

The population consists of all the students belong to B.Sc. nursing college, Kengeri, Bengaluru.

Sample

The students who fulfil the inclusion and

exclusion criteria were the samples for the study and sample size was 29.

Criteria for Sample Selection

Inclusion Criteria

It includes the students who

1. Male and female B.Sc. nursing students.
2. Are only students between 19- 30 years.
3. Are B.Sc. nursing 2nd year students.
4. Can read and write English language.

Exclusion Criteria

It excludes the

1. Students who are not willing to participate.
2. Students who were not present at the time of data collection.

Sampling Technique

Convenience sampling technique.

Tools for Data Collection

The tool for data collection consists of the following section:

Section A: Structured knowledge questionnaire was used for assessing knowledge regarding diversion procedure and stoma care among B.Sc. nursing 2nd year students.

Procedure for Data Collection

The data was collected after getting permission from the concerned authorities of Padmashree Institute of Nursing, Kengeri, Bengaluru. The researcher introduced himself to the participants. The objectives of the study were explained. The researcher himself collected the data among B.Sc. nursing 2nd year students. The data was conducted in the following phases.

1. *Phase I:* Pre-test was conducted to assess the existing knowledge regarding diversion procedure and stoma care among B.Sc. nursing 2nd year students.
2. *Phase II:* After assessing the pre-test knowledge, workshop based teaching on diversion procedure and stoma care was conducted to students for the duration of 4 hours by using lecture method, videos and demonstration.

3. *Phase III:* Post-test was conducted with the same structured questionnaire after workshop based teaching regarding diversion procedure and stoma care among B.Sc. nursing 2nd year students.

Content of the Tool

The tool consists of one section:-

Section A: Structured questionnaire was used to assess knowledge of B.Sc. nursing students regarding diversion procedure and stoma care.

• *Scoring Interpretation*

Scoring key was prepared for section A, score '1' was awarded to correct response and '0' for wrong response in all items. Thus a total score of 24 were allotted to interpret the level of knowledge of students, the score were categorized as-

- a. <50%- Inadequate knowledge
- b. 50-75%- Moderate knowledge
- c. >75%- Adequate knowledge

Reliability

In order to establish reliability of the tool, the test split half method was used. The calculated "r" value was 0.81 for knowledge and the developed tool was found to be reliable.

Variable	Reliability	Method of Reliability
Knowledge	0.81	Split half method

Results

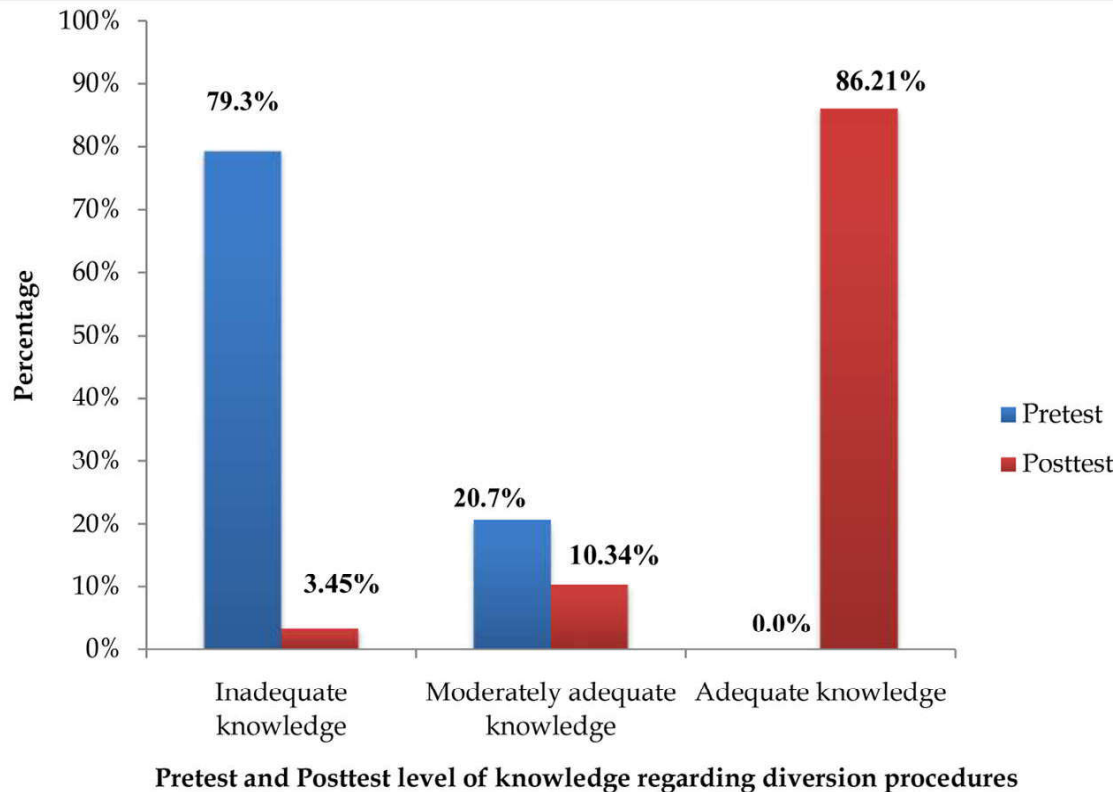
The mention table 1 shows that in pretest none of the subject had adequate knowledge, majority of the subjects 23(79.3%) had inadequate knowledge and 6(20.7%) had moderate knowledge. Whereas in

posttest majority of the subject 25(86.21) had adequate knowledge, 3(10.34%) had moderate knowledge and 1(3.45%) of the subject had inadequate knowledge.

The table 2 shows the range, mean, standard deviation and mean percentage of the pretest and posttest level of knowledge regarding diversion

Table 1: Frequency and percentage distribution of pretest and posttest knowledge regarding diversion procedures and stoma care among B.Sc nursing students in selected college, Bengaluru N=29

Sl. No	Level of knowledge	Pre-test		Post test	
		Frequency	Percentage	Frequency	Percentage
1	Inadequate (<50%)	23	79.3	1	3.45
2	Moderately adequate knowledge (50-75%)	6	20.7	3	10.34
3	Adequate knowledge (>75%)	-	-	25	86.21
	Overall	29	100	29	100



Graph 1: Percentage distribution of knowledge regarding diversion procedure and stoma care among B.Sc. nursing students in selected college, Bengaluru

Table 2: Range, Mean, SD, Mean Percentage of pretest and posttest knowledge regarding diversion procedures and stoma care among B.Sc nursing students in selected college, Bengaluru. **N=29**

Sl. No.	Aspects of knowledge	Max score	Range	Pre-test			Posttest			
				Mean	SD	Mean %	Range	Mean	SD	Mean %
1.	General information regarding urinary diversion.	8	1-6	3	1.3	37.5	2-8	6.31	1.70	78.87
2.	Nursing assessment of stoma.	2	0-2	1.69	0.54	84.5	1-2	1.86	0.12	93
3.	Knowledge regarding stoma care	12	1-10	5.14	2.17	42.83	5-12	11	1.55	91.66
4.	Complication	2	0-2	0.55	0.65	27.5	0-2	1.62	0.62	81
	Over all	24	6-8	10.41	3.24	43.37	8-24	20.38	2.92	93

procedures and stoma care among B.Sc nursing students in selected college, Bengaluru.

With regard to general information regarding urinary diversion, out of maximum score of 8, in the pretest the range was 1-6, the mean score was found to be 3, the standard deviation was 1.3 away from the mean and the mean score percentage was found to be 37.5%. In posttest the range was 2-8 with a mean score was 6.31 and standard deviation was 1.70 away from the mean score and the mean percentage was found to be 78.87%.

With regard to nursing assessment of stoma, out of maximum score of 2, in pretest the range was found to be 0-2, the mean score was 1.69, the standard deviation was found to be 0.54 away from the mean,

and the mean percentage was 84.5. In posttest the range was 1-2 with a mean percentage of 1.86 and the standard deviation was 0.12 away from the mean and the mean percentage was found to be 93%.

With regard to knowledge regarding stoma care, out of maximum score of 12, in pretest the range was 1-10, mean score was 5.14, standard deviation was 2.17 away from the mean with a mean score of 42.83. In posttest knowledge regarding stoma care the range was 5-12, mean score was 11, standard deviation was 1.55 away from the mean and the mean percentage was 93%.

With regard to complication regarding diversion procedure, out of maximum score of 2, in pretest the range was 0-2, mean score was 0.55, standard

deviation was 0.65 with a mean percentage of 27.5%. Whereas in posttest the range was 0-2, the mean score was 1.62. standard deviation was 0.62 away from the mean with a mean percentage of 81%.

The maximum overall score was 24, in pretest the range score was found to be 6-18, the mean was 10.41,

the standard deviation was found to be 3.24 and the overall mean score percentage was 43.37%. In posttest, the range was 8-24 with a mean score of 20.38 and standard deviation was 2.92 away from the mean and the mean score percentage was 93%.

Table 3: Paired t-test analysis for the statistical significance of pretest and posttest score of knowledge regarding urinary diversion N=29

Sl. No	Aspect of knowledge	Max score	Paired t-difference			t-test value	P-value
			Mean	SD	Mean%		
1.	General information regarding urinary diversion	8	3.31	1.61	41.37	10.18***	p<0.001
2.	Nursing assessment of stoma	2	0.17	0.53	8.5	1.73	p>0.05NS
3	Knowledge regarding stoma care	12	5.66	2.01	47.17	15.16***	p<0.001
4	Complication	2	1.06	2.99	53	1.90	p>0.05NS
	Overall	24	10.06	3.34	41.91	16.20***	p<0.001

Note: *-denotes significant (p<0.001) for df=28.

The above Table 3 shows that the outcomes of pre test and post test level of knowledge and statistical significance based on paired t-test.

The maximum score with regard to general information was 8, mean difference was 3.31, SD was 1.61, mean difference percentage was 41.37% and paired t-value was 10.01*** which was found to be significant at the level of p<0.001.

With regard to nursing assessment maximum score was 2, mean difference was 0.17, SD was 0.53, mean difference percentage was 8.5% and paired t-value was 1.73 and was not statistically significant at the level of p<0.05.

With regard to knowledge regarding stoma care, maximum score was 12, mean difference was 5.66, SD was 2.01, mean difference percentage was 47.17% and paired t-value was 15.16*** and was found to be significant at the level of p<0.001.

With regard to complication, maximum score was 2, mean difference was 1.06, SD was 2.99, mean difference percentage was 53% and paired t-value was 1.90 and was not statistically significant at the level of p<0.05.

The overall knowledge maximum score is 24, mean difference was 10.06, SD was 3.34, mean difference percentage was 41.91% and paired t-value was 16.20*** at the level of p<0.001.

Hypotheses Testing

H₁: There is significant difference in the mean pre test and post test level of knowledge regarding diversion procedures and stoma care among B.Sc nursing students in selected college, Bengaluru.

H₂: There is no significant difference in the mean pre test and post test level of knowledge regarding diversion procedures and stoma care among B.Sc nursing students in selected college, Bengaluru.

The above Table 3 shows the outcomes of the pretest and posttest scores and statistical significance based on paired t-test. It was found to be significant at 0.05 levels. Hence, null hypothesis was rejected and research hypothesis was accepted.

Discussion

The pretest knowledge range was 6-18, mean 10.41, standard deviation was 3.24, mean percentage was 43.37%. The post test knowledge range was 8-24, mean 20.38, standard deviation was 2.92, and mean percentage was 93%. The outcome of paired t test on knowledge score and statistical significance based on Paired t test.

The maximum score was 24, mean was 10.06, standard deviation was 3.34, mean percentage was 41.91% and paired t test value was 16.20 that hence there exists a statistical significance.

Similar study was conducted on Level of knowledge regarding colostomy care among staff nurses, 8(53.3%) had inadequate knowledge, 6(40%) had moderately adequate knowledge and 1(6.7%) had adequate knowledge. Shows that with regard to knowledge regarding colostomy among nursing students, 8(53.3%) had inadequate knowledge, 5 (33.3%) had moderate knowledge and 2(13.3%) had adequate knowledge.

Conclusion

The study concluded that majority of staff nurses and nursing students had inadequate knowledge regarding colostomy care [24].

The finding of the study showed, on assessment of level of knowledge regarding diversion procedure and stoma care among BSc nursing students in the pre test, 6(20.7%) had moderate knowledge, and 23(79.3%) had inadequate knowledge and none had adequate knowledge. And in the post test, 25(86.21%) had adequate knowledge and 3(10.34%) had moderate knowledge and 1(3.45%) had inadequate knowledge. The paired t test was carried out and it was found to be significant at $p < 0.005$ level. Hence null hypothesis is rejected and research hypothesis is accepted. The study concluded that the workshop based teaching was effective in improving knowledge regarding diversion procedure and stoma care among BSc nursing students

Conflict of Interest

Author don't have any conflict of interest

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