

Knowledge Regarding Stoma Care among Nursing Students

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ABSTRACT

Background: Stoma and ostomy are Greek terms meaning mouth or opening done to treat several benign and malignant intestinal conditions, due to a change in bowel habits, anatomically modified by surgical creation of an opening in the abdominal wall involving parts of the gastrointestinal tract. Formation of colostomy is sometimes necessary and at other times mandatory. The colostomy patients wear a disposable pouch to collect the stool. A colostomy may be temporary or permanent, depending on the medical reason for the surgery.

Objectives: To assess the knowledge of stoma care among PBN 3rd year student nurses

: To identify the association of knowledge with the selected demographic variables.

Methodology: A cross-sectional descriptive study was conducted among 39 student nurses of PBN 3rd year studying at the Hope International College with the objective to assess the knowledge regarding care of stoma among student nurses. Non-probability purposive sampling technique was used in this study and self-administered structured questionnaire was used in this study. The study was done in a private college of Lalitpur (Hope International College).

Result: In this study 7.7% of the total student nurses had good knowledge, 89.7% student nurses had average knowledge and 2.6% student nurses had poor knowledge. Also found that there is no association between knowledge and other variables like age, experience, training, in-service education, care and interest as it showed no significance statistically.

Conclusion: The study concluded that majority of student nurses had average knowledge regarding stoma care.

KEYWORDS

Knowledge, PBN, Stoma, and Student Nurses

INTRODUCTION

Background of the Study

Stoma has a negative impact on the psychosocial aspects of colostomy patients as presence of anxiety, depression and lack of self-esteem. National Digestive Diseases association confirmed that patients with colostomy are at increased risk of depression and social isolation as at least 25% of patients develop clinically significant depression following colostomy (El Sayed et al., 2015). Adaptation to such big change in life is important as these patients needs to experience new behavior for self-management and self-care. Successful adaptation of new behavior requires knowledge, skills, and certain levels of self-efficacy to enhance quality of life (Culha et al., 2016).

The adverse impacts on stoma patients are physical, psychological and social. The physical problems of ostomates included leakage, skin problems, ballooning and odor. (Bajracharya, 2010) The most common physical problems with the stoma include leaking, peristomal skin problems, and the need for adaptation of stoma appliances and the need for adaptation of clothing to the presence and site of the stoma, which has a significant impact on the patient's daily life (Shaffy, Kaur, Das, & Gupta, 2012).

Depending on stoma surgery, not only excretion form of individuals but also individuality, self-respect, sense of independence, sexual life, nutritional status, social life, working life, dressing cases, self-care learning and functional abilities are affected (Lim, Chan, & He, 2015).

Gas and odor, fecal leakage, skin problems, fatigue, loss of appetite, indigestion, nausea, diarrhea, constipation, hernia, pain (Reese et al., 2014) stool leakage, bad smell, the independence of the reduction due to depression, anxiety (Danielsen & Rosenberg, 2014) peristomal skin irritation and infections, social isolation, reduction in the frequency of social activity, problems in sexual life, business life problems, travel difficulties and body image problems are most common experienced stoma problems by individuals (Werth, Schutte, & Stommel, 2014).

Peristomal skin complications can arise from a multitude of factors including chemical injury from leakage of stoma effluent, muco-cutaneous separation, and trauma and mechanical injury from adhesive stripping from repeated appliance application, contact dermatitis, infection, or pyoderma gangrenosum. Additionally, these complications are frequently encountered in patients with other stoma-related complications such as prolapse, retraction, and parastomal hernia. Peristomal skin complications in aggregate occur with a reported incidence of up to 43%, and they are more commonly seen in patients with ileostomies (Steinhagen et al., 2017).

Frequently, the complications can be managed with the involvement of clinical ostomy nurse specialists however; these problems are not always brought to the attention of the surgeon and therefore may be underreported. (Kwiat & Kawata, 2018). Therefore, it is necessary to educate evaluate the nurses knowledge regarding stoma care. However, these areas of research are not explored more.

Rationale of the Study

The incidence of colorectal malignancies are on the rise worldwide which is also now seen among the Asian population. The significant increase in morbidity and mortality has made

colorectal cancer a major public health concern. Increase in the incidence of colorectal malignancies has significantly contributed to the increase in ostomy creation (Golicki, Styczen, & Szczepkowski, 2010).

Due to the increasing incidence of colorectal cancer and urinary cancer, stoma surgery rate is also increasing. Teaching on stoma care and stoma skills given by enterostomal therapist during post-operative and discharge period enable clients to increase self efficacy in ostomy management (Pandey, Baral, & Dhungana, 2008).

The patient with colostomies are physically, psychologically and socially affected in their daily lives and have to adjust their life according to it. However, the knowledge regarding the care of colostomy is very poor despite the increasing numbers of colostomy in patients. The knowledge of self-care is also found to be very poor in patients with colostomy. The practice in the care for colostomy is not adequate and proper due to the lack of knowledge. The knowledge among the nurses is also very poor regarding the care of colostomy which has ultimately affected in the practice of care like knowing the danger signs, infection prevention techniques, attaching the pouch, emptying the pouch, etc. Skingley (2004) as cited in Bradshaw, E., and Collins, B. (2008) has forwarded that the nurse are not confident in caring the client with stomas. In most the research conducted among nurses, majority of nurses had poor knowledge as well as the perceived responsibility of the colostomy care was hardly seen. As nurses are the main person in the care of patients in the hospital, the nurses should have adequate knowledge about colostomy and well skilled for the practice of colostomy care. Hence, it is necessary to explore the research among nurses regarding stoma care to boost up the practices among them.

Objectives of the Study

The objectives of the study are as follow:

a. General Objective

1. To assess the knowledge regarding stoma care among PBN third year students.

b. Specific Objectives

1. To assess the level of knowledge regarding stoma care among PBN third year students.
2. To find out the association of knowledge with selected demographic variables.

RESEARCH METHODOLOGY

A descriptive cross-sectional research design was conducted in the Hope International College (Satdobato, Lalitpur) among nursing students of PBN Third Year. The sample size was 39. Sampling Technique Non- probability total enumerative sampling technique was used. Research Instrumentation includes structured knowledge questionnaire that consists of Part I: Questions related to background information. This includes socio-demographic information including age, marital status, current work place, work experience, in service and trainings. Part II: Questions related to the knowledge on definition, types of colostomy, care of colostomy, complications and management of colostomy. The knowledge scores was added up, converted to percentage and graded as good knowledge (65-100%), average knowledge (32-64%) and poor knowledge (0-31%). (Acharya et al., 2015). Validity of an instrument was maintained through review of literature, consulting with concerned research advisor, colleagues and other subject experts. Reliability of the research instrument was maintained by pre-testing the questionnaires among 10% of the total sample. Data was collected by the researcher herself by using primary sources

of information with self-administered questionnaires. Written permissions from were obtained in order to carry out the research. Oral and written informed consents of students nurse were also obtained by informing them about the aim of the study. Data was collected after getting permission from the administration of Hope International College. Data was analyzed and interpreted according to the objectives and the nature of research questions with the help of Statistical Package for Social Science (SPSS) version 20 using descriptive statistics like frequency, percentage, mean and standard deviation. The findings was presented in different academic tables.

RESULTS

Table 1: Socio-demographic Information of the Respondents.

n=39

Variables	Frequency	Percentage
Age interval		
20-30	32	82.1
30-40	4	10.3
40-50	3	7.7
Experience		
1-10	34	87.2
10-20	4	10.3
20-30	1	2.6
Training		
Yes	1	2.6
No	38	97.4
In-service		
Yes	10	25.6
No	29	74.4
Interest		
Yes	29	74.4
No	10	25.6
Care		
Yes	14	35.9
No	25	64.1

Table 1 represents that more than one-third of the participants (82.1%) were aged between 20-30 years, 10.3% were between 30-40 and remaining 7.7% were above 40 years. Similarly, more than half of the participants i.e. 87.2% had experience between 1-10 years, 10.3% participants

had 10-20 years' experience and only 1 (2.6%) participant had experience between 20-30 years. Likewise, almost no participants (97.4%) had any sorts of trainings related to stoma while only 2.6% of participants had acquired trainings. In the study, 25.6% of participants had taken in-service education related to stoma while nearly one-third (74.4%) participants did not take any in-service education. In addition, among the participants, 74.4% had interest in stoma care while the remaining 25.6% did not have interest. Lastly, 35.9% participants had cared ostomy patients but 64.1% of participants had not cared any ostomy patients.

Table 2: Knowledge Related Response of the Respondents.

n=39

Variables	Frequency	Percent
Definition		
Colostomy	15	38.5
Ileostomy	1	2.5
All of the above	23	59
Colour		
Red	12	30.8
Pale	23	59
pink	4	10.2
Don't know	-	
Appearance		
Shiny and moist	25	64.1
Has nodules	2	5.1
Has cuts and torn	3	7.7
Don't know	9	23.1
Peristomal skin		
Red	15	38.5
Similar to other skin	13	33.3
Painful to touch	6	15.4
Don't know	5	12.8
Temporary		
Colostomy	7	17.9
Colorectal cancer	18	46.2
Imperforated anus	10	25.6
Hirshprung's disease	4	10.3
Crohn's disease	-	-
Emptying stoma		
Totally filled	2	5.1
Half filled	6	15.4
		79.5

Variables	Frequency	Percentage
1/3rd filled	31	
Techniques of cleaning	27	69.2
Centre to periphery	10	25.6
Periphery to centre	2	5.1
Don't know		10.3
Not a sign of peristomal damage	4	12.8
A rash around the stoma	5	15.4
Bluish purple discolor	6	61.5
A bulge around stoma	24	
Peristomal skin looks similar to other skin		15.4
	6	59
Prevention of leakage	23	15.4
Remove the base plate	6	10.3
Change stoma frequently	4	
Apply the largest plate		17.9
Use of stoma adhesives	7	2.6
	1	2.6
Prevention of infection except	1	76.9
Change pouch regularly	30	
Ballooning of pouch		43.6
Clean skin with water	17	7.7
Use of right pouch	3	
		28.2

Prevention of fluid deficit	11	20.5
Monitor I/O	8	
Monitor vital signs with skin turgor		
Administering IV fluids	17	43.
All of above	3	6 7.7
	11	28.2
Maintain skin integrity	8	20.5
Prolonged sitting position		
Aseptic dressing		
Provide sitz bath	5	12.8
Side lying with head high	1	2.6
	33	84.5
Improve self-care		
Education		
Trainings		
All of above		
	18	46.2
	18	46.2
	2	5.1
	1	2.6
Diet	-	-
Low fiber		
bland diet		
High fiber diet		
Whole grains and legumes	1	2.6
Raw fruits and vegetables	21	53.8
	11	28.2
Reversal surgery	6	15.4
4 weeks		
6 weeks		
3 months	14	35.9
6 months	3	7.7
	11	28.2
Rare complications		
Intussusception		
Internal bleeding		
Hernia Infection		

Table 2 represents that 59% of the participants defined stoma as opening of colostomy, ileostomy and urostomy. Only 30.8% of the participants described the color of stoma as red. More than half of the participants i.e., 64% participants mentioned appearance of stoma as shiny and moist. Only 33.3% of participants stated that the peristomal skin is similar to other skin. 25.6% stated Hirschsprung's disease as the cause for temporary colostomy. Most of the participants i.e. 79.5% participants mentioned 1/3rd filled stoma for emptying the pouch. 69.2% mentioned the techniques to clean stoma is from centre to periphery. 41% mentioned peristomal skin looks similar to other skin as not the sign of peristomal damage. 61.5% mentioned use of stoma adhesives to prevent leakage from stoma. 59% mentioned ballooning of pouch as the exception for infection prevention in stoma. 76.9% mentioned all of above as the prevention of fluid deficit. 20.5% mentioned side lying with head elevated as the techniques to maintain skin integrity. Most of the participants i.e., 84.5% mentioned all of above to improve self-care. 46.2% mentioned low fiber bland diet as the appropriate diet for colostomy patients. Only 28.2% mentioned the ideal time for reversal surgery is 3 months. 35.9% mentioned intussusception as the rare complications of stoma.

Table 3: Knowledge Level of the participants

n= 39

Variables	Frequency	Percentage
Poor Knowledge	1	2.6
Average Knowledge 35 89.7	35	89.7
Good Knowledge	3	7.7

Table 3 represents the overall knowledge of the participants in which only 2.6% of the total participants had poor knowledge, most of the participants i.e., 89.7% participants had average knowledge and 7.7% of participants had good knowledge.

Table 4: Association between Variables and Knowledge Level

n=39

Variables	Knowledge level			Chi-Square	P-Value
	Poor	Average	Good		
Age Interval				2.229 ^a	>0.05
20-30	1(3.1%)	29(90.6%)	2(6.2%)		
30-40	0	3(75%)	1(25%)		
40-50	0	3(100%)	0		
Experience Interval				0.655 ^a	>0.05
1-10	1(2.9%)	30(88.2%)	3(8.8%)		
10-20	0	4(100%)	0		
20-30	0	1(100%)	0		
Training				0.117 ^a	>0.05
Yes	0				
No	1(2.6%)	1(100%) 34(89.5%)	0 3(7.9%)		
In-service				3.135 ^a	>0.05
Yes	1(10%)	8(80%)	1(10%)		
No	0	27(93.1%)	1(4%)		
Care				3.324 ^a	>0.05
Yes	1(7.1%)	24(96%)	2(14.3%)		
No	0	2(14.3%)	2(6.9%)		
Interest				3.935 ^a	>0.05
Yes	0	26(89.7%)	3(10.3%)		
No	1(10%)	9(90%)	0		

Table 4 represents the association between the dependent and independent variables; significant: (0.05) p-value. While checking the association between age and knowledge level, 3 cells had less than 5 value which is not statistically significant so there is no association. Likewise, while checking the association between experience and knowledge level, 3 cells had less than 5 value which is not statistically significant so, there is no association between experience and knowledge in this study. While computing the association between trainings and knowledge level, 2 cells had value less than 5 which is also not statistically significant so there is also no association between trainings and knowledge level. While checking the association between in-service education and knowledge level, 3 cells had value less than 5 which shows no significance statistically so there is no association between in-service education and knowledge level.

Moreover, while checking the association between cares of stoma with the knowledge level, 2 cells had value less than 5, which is also not statistically significant so there is no association between care and knowledge.

DISCUSSION

In the present study, 7.7% of the total student nurses had good knowledge, majority i.e., 89.7% student nurses had average knowledge while remaining 2.6% student nurses had poor knowledge. There was no association between knowledge and variables. Similar study at institutional based quantitative cross-sectional study design was conducted in surgical wards, intensive care and oncology units of selected public hospitals in Addis Ababa from March 15 to April 30, 2017. The study revealed that half of nurses (51.3%) had good knowledge on colostomy care (Geleta, 2017).

7.7% of the total student nurses had good knowledge, majority i.e., 89.7% student nurses had average knowledge while remaining 2.6% student nurses had poor knowledge. There was no association between knowledge and variables. In contrast to this study, Institutional based quantitative cross-sectional study design was conducted in surgical wards, intensive care and oncology units of selected public hospitals in Addis Ababa from March 15 to April 30, 2017. In the same study, association was found between knowledge and experiences, training and care. (Geleta, 2017)

CONCLUSION

The study was conducted with the objectives to assess knowledge regarding the care of stoma among PBN 3rd year students studying in Hope International College, to find out association between the levels of knowledge of nurses with selected demographic variables. In this study, only 7.7% of the total student nurses had good knowledge, majority i.e., 89.7% student nurses had average knowledge while remaining 2.6% student nurses had poor knowledge. Also found that there is no association between knowledge and other variables like age, experience, training, in-service education, care and interest as it showed no significance statistically.

RECOMMENDATIONS

The study can be replicated on the large-scale sample, which helps to better generalization of the findings. Comparative study can be done in different years and faculties on the same topic. Similar study on knowledge, attitude and practice can be done and their relationship can be analyzed. For study area It would be better if the organization would conduct the in-service education on regular basis.

CONFLICT OF INTEREST

The researcher has no any conflict of interest in conducting this study.

BUDGET

Self-Budgeting.

AUTHOR CONTRIBUTION

Rozeena Maharjan (PI), Bhawana Bhandari (Co-PI), Anil Babu Ojha (Co-author), Kopila Migrant (Co-author), Jyanendra Jha (Co-author), Uma Kafle (Co-author), Anamika Dangol (Co-author), Rupesh Mishra (Co-author)

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