

## Effects of Bowel Stoma Care Education Program on Nurses' Practice at Khartoum State Governmental Hospitals- Sudan

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### Abstract

**Background:** education program plays a major role in teaching, enhancing, and improving nurses' knowledge and practice regarding bowel stoma care. **Aim:** To study the effectiveness of education program on nurses' performance regarding bowel stoma care at the governmental hospitals in Khartoum state. **Methods:** A quasi-experimental hospital base study was conducted in three governmental hospitals; fifty nurses were chosen by using Probability Proportional to Size (PPS) sampling technique. Data were collected using checklist for practice assessment in three phases. Data were analyzed using Statistical Packages for Social Sciences (Version 23) presented in tables and figures using descriptive percentages, means and stander deviation, chi sure test used for relation significance and T-test used to show the difference between pre and post means. **Results:** shows that mean of total practice score changed from poor to good .and there was a highly significant difference at  $p < .001$  between pre- and post-implementing education program. **Conclusion:** On light of the study results it can be concluded that there was a highly significant improvement in practice items between pre and post education program, and the study recommended that there should be an in-service training and periodic educational programs targeting nurses to improve nurse's knowledge and practices.

**Keywords:** Educational program, Nurses, Practice, stoma care.

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### INTRODUCTION

Evidence indicates that a common problem for an ostomy person is the development of peristomal skin irritation and pouch leakage, which has negative effect on quality of life.(Colwell *et al.*, 2019) A Nurse who has more than 46 years said, she has encountered many nurses who suggested having little training and even less clinical ride with sufferers who have fecal or urinary stomas. These nurses have stated that when they stumble upon an affected person who has had an ostomy, they are regularly negative on how to care for the stoma and how to assess quite several issues of the stoma and the surrounding skin (Wise, 2019). This lack of knowledge can make contributions to the nurse's stress and might also make the affected personal and household individuals to lose self-assurance in the nurse (Wise, 2019). Nurses need to know the characteristics of the normal stoma and expected appearance before they can recognize stoma complications (Stelton, 2019).

Nurses can play a role in promoting excellent health education by teaching basic capabilities and

offering information about the following topics: intestinal ostomy management based on available resources and how to acquire the supplies. However, folks need to adapt to their care in a way that suits with their existence and day to day activities. During the postoperative duration, other psychological issues may additionally arise. People with a newly shaped stoma may additionally be undecided on how they can live with the stoma. They might additionally desire to know how they can best to relate with their partners, whether or not they can proceed to work, and what to do if their stoma bag leaks (Ansari, 2018).

The nursing attendant as an educator should be involved in giving befitting education to patients with liberal input and assessment to advance instruction. Perioperative colostomy patient instruction can work with change, lessen complexities, and work on personal satisfaction. It has been accounted for that patient training may diminish the length of medical clinic stay, the recurrence of postoperative difficulties, and the recurrence of clinic readmissions. In addition, much

expert exertion has been placed into patient's training and education (Abdelmohsen, 2020).

### General guidelines for stoma care

In the modern health management guidelines, patient satisfaction is of paramount importance when planning future care and treatment, but information on how to achieve this for stoma patients is lacking. It seems that there are some factors that can change the intensity of these complications and promote good quality of life. One of these factors may be stoma siting. (Mahjoubi *et al.*, 2010) psychosocial concerns should become part of the care routinely given to stoma patients (Simmons *et al.*, 2007).

### The care divided to three steps

Pre procedure: checking the order of stoma care, identifying the patient explanation instruction with positioning, and keeping privacy. Assessment: assess stoma color, temperature, size, shape, peristomal skin and characteristic of fecal waste. Planning: wash hands and gloving. Gathering equipment's needed (clothes or paper towel, gloves, non-oily soap, stoma measuring guide, scissors, new pouch, plastic bag, air freshener and cream).

### Intra procedure

#### Implementation

(Place the disposable dipper under the client's hips, wear gloves, Gently remove the soiled stoma bag from the skin, Discard soiled stoma bag in plastic waste bag, Remove gloves, wash hands and wear new gloves, inspect the stoma and skin around assess the color, Wash the area around the stoma with non-oily soap and warm water, dry the skin around stoma with paper towel or clean clothes, Place the measuring grid on the back of the pouch barrier, Trace the pattern (sized to fit within 1/8 inch of stoma), Use scissors and cut the skin barrier, apply small amount of lubricant or protective cream, Put a pouch in the center & Smooth the sticky surface of the pouch onto the skin, Hold the pouch firmly in place for a few moments, Close pouch end securely, Remove gloves, wash hands and discard solid equipment. (Calvert Sylvia, Disley Helen, 2019).

#### Post procedure: Evaluation

Color, consistency, amount of feces, Condition of stoma and Patient comfort

#### Documentation

Record color, consistency, amount of feces, Condition of stoma and Patient comfort & any problems

### Coping with the stoma

Many patients can cope with stoma well; however, some patients experience considerable pain and suffering. Better preoperative evaluation and consultation and longer follow-up in the ostomy department will help the management of these patients

and may help improve their quality of life. (Nugent *et al.*, 1999).

Ileostomy patients felt more comfortable wearing a shoulder strap instead of a waist belt. Regarding the replacement of underwear, this helps to avoid leakage in patients with ileostomy, and in patients with colostomy, this change helps to better secure the bag, thereby obtaining greater comfort. Regarding the use of swimwear, strategies range from accepting the use of swimsuits instead of bikinis to developing strategies for continuing to wear bikinis, such as the use of blinds and sticky tattoos (BonilldelasNieves *et al.*, 2014).

Colostomy Patients are more likely to control their care, improve their management, and are less reluctant to engage in social interaction, which seems reasonable. This shows that there is a complex relationship between the acceptance, social interaction, and self-efficacy of ostomy care. If we are to find other ways to provide effective care for patients with colostomy, we must untie this relationship (Simmons *et al.*, 2007).

### Nursing role

Those who know little or no understanding of the complexity of their role often misunderstand the role of an ostomy nurse. Stoma nurses face challenges in communicating their important role in quality, value, and cost (Davenport, 2014). Nurses play an important role in helping patients transition smoothly into stoma life (Lim *et al.*, 2015). The concept of stoma nurse is an early nursing profession that originated in the United States. There, ostomy nursing nurses are called enterostomy therapists, usually combining their roles with fistulas, wounds, and incontinence (Amanda Baxter, 2000). The role of the Stoma Nursing Nurse (SCN) is extensive, including preoperative support, postoperative teaching, and community follow-up. Although SCN plays a key role in the support and clinical management of stoma patients, ward nurses play an important role in the rehabilitation and care of patients. (Porrett & Mcgrath, 2005).

### Patient education

Some people may experience grief because of the creation of a stoma. The nurse can see signs of denial, grieving, anger, isolation, depression, and finally acceptance during home visits. More than one educational session is likely to be required by the patient and caregiver. (Kirkland-Kyhn *et al.*, 2018).

Colostomy patients must adjust to significant changes in bowel function, food habits, and body image. It may be difficult to adjust to these changes, but our findings suggest that proper stoma management can help. As a result, as is the case now, ensuring that patients have the skills to manage their colostomy is critical. However, as the findings reveal, psychological

and, to a lesser extent, illness aspects promote adjustment, implying that addressing them should be part of the patient's care as well (Simmons *et al.*, 2007).

Patient education plays a key role in the treatment and management of stoma problems, so supporting and educating patients and their families during and after surgery is essential for living a stoma-friendly life (Ansari, 2018). Stoma education usually starts three to five days after surgery. The patient will learn and demonstrate to the ostomy nurse, who will observe them as they demonstrate the replacement of the ostomy appliance. If deemed unskilled, the patient will return to another teaching course after discharge (Lim *et al.*, 2019). Teaching should be conducted in an organized manner, supplemented by reasonable teaching and learning principles, and teaching should be used where appropriate plan. Appropriate to ensure that important aspects are not omitted (O'Connor, 2013) stoma patient should be independent with their stoma care (Bradshaw & Collins, 2008).

### Discharging ostomy patient

To guarantee that a patient with a new stoma obtains the essential ostomy education before discharge, a detailed discharge plan is required. Basic skills should be taught, as well as information on how to manage the ostomy (e.g., how to empty and change the pouch, how to order supplies, available manufacturers, dietary/fluid guidelines, probable problems, and medications, and managing odor and gas, assisting with transitions in care, and providing information about resources for support and assistance (Prinz *et al.*, 2015). Teaching colostomy irrigation for patients with permanent colostomies especially workers (Mueller & Reimanis, 2012).

Written instructions on how to change the storage bag can help the patient perform the first storage bag change at home without the support of a nurse. Provide other information about diet, exercise, and support groups in writing as needed. If the patient is discharged from the hospital not within the scope of the hospital's stoma nursing nurse, he should be referred to the receiving stoma nurse as soon as possible, and the date of discharge, referral details and contact information should be confirmed before the home visit. Provide a date when the stoma nurse will meet with them, otherwise they will call you. It is also important to ensure that the patient has the contact information of the stoma nursing nurse. Ensure that patients have the appropriate knowledge to understand the options for obtaining more supplies and supplementary prescriptions in the community in accordance with local policies. (Judy Hanley RGN, 2015).

### Nursing role in community

Stoma nurses are one of the main links between multidisciplinary teams, patients, families, hospitals, and communities. The ostomy nurse can

coordinate a multidisciplinary team, providing a team approach and bringing together the necessary experts in the community, to ensure that patients receive comprehensive, personalized, and timely care. The ostomy nurse is usually the patient's first contact for advice and contact with other members of the multidisciplinary team (Barwell, 2012).

Nursing staff are those who care about patient care in the hospital and at home. Most caregivers cannot provide quality care to colostomy clients. All over the world, in order to improve the quality of life of colostomy patients, it is necessary to help educate their nursing staff in countries without the latest technology (Kadam & Shinde, 2014).

Stoma nurse will provide Organized information exchange between the hospital and the community will ensure continued teaching and support after discharge, promote positive adjustments in stoma formation, and therefore promote successful recovery (O'Connor, 2013).

### General objective

To study the effect of education program on nurse's practice regarding bowel stoma care in Khartoum State

### Specific objective

1. To assess nurses' practice pre and post education program regarding care of bowel stoma.
2. To study correlations between dependent and independent variables of the study.

### Hypothesis

H<sub>0</sub>: educational program about bowel stoma care has no effect on nurse's practice.

H<sub>1</sub>: educational program about bowel stoma care has positive effect on nurse's practice.

## METHODOLOGY

A quasi-hospital base study: pretest and posttest for the same group used to evaluate the effect of educational program on nurses' performance regarding bowel stoma care 2021. The study conducted in Khartoum Governmental hospitals which have bowel stoma patients. Different qualifications of nurses who holding diploma, BSC and MSC degree of nursing science, who works in GIT surgery department were chosen, three hospitals were selected out of seven by using Probability Proportional to Size (PPS) to specify the sample size which suspected to be around 50 nurses. an observational check list, which consist of three steps pre, intra and post to assess the practice was used. A pilot study was done and Cronbach Alpha coefficient for practice items was .878 so the study instruments were valid and reliable for conducting the research study. Data were collected in three phases (pretest, implementation of the program, and posttest). Data presented using descriptive statistics in the form of frequencies and percentages for qualitative variables,

and quantitative variables categorical variables will compare using chi-square test statistical significance will be considered at p-value <0.05 each question presented in the result (tables or figures). An official letter taken from post graduate study board University of Alneelain, approval from Khartoum state ministry of health to conduct the study. Formal headed letter sent to the managers of selected hospitals. Respect to humanity

the participation was voluntary without any force or pressure. The researcher respects the right of participants written informed consent was taken individually from each participant, after explanation of purpose, justification of study in clear and simple words.

## RESULTS

**Table-1: Pretest and posttest means practice of the study group (n=50)**

Item	Mean		Std. Deviation	
	pretest	posttest	pretest	posttest
Pre procedure	21.3400	35.1600	4.04873	4.78672
Intra procedure	14.4400	28.2600	2.81512	5.48397
Post procedure	4.0600	12.6600	3.12599	.77982

**Table-2: Mean practice differences between pre and posttest (n=50)**

Practical	Mean	Std. Deviation	Std. Error Mean
pretest	39.8400	7.86716	1.11258
posttest	76.0800	9.82051	1.38883

**Table-3: Cross tabulation between surgical word experience pre posttest**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	41.431 <sup>a</sup>	50	.801
Likelihood Ratio	49.087	50	.510
Linear-by-Linear Association	4.425	1	.035

**Table-4: Cross tabulation between area of training program and practice pre posttest**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	103.398 <sup>a</sup>	72	.009
Likelihood Ratio	51.171	72	.970
Linear-by-Linear Association	6.769	1	.009

## DISCUSSION

The overall aim of this study is to assess the effectiveness of implementing an educational program regarding bowel stoma care on nurses' practice. The socio-demographic findings of the study revealed that most respondents were predominantly female (92%). As regard to age (44%) of them were less than thirty years old (20-30 years), as well as to years of experience (46%) of them have less than two years' experience this. As it comes to qualification the majority (66%) were bachelors. As regard to candidates having stoma care training program most of them (800%), they never enrolled in training program before. The study reveal that , nurses skills regarding stoma care practices regarding assessment, planning( Gather supplies )pre, post, these includes of washcloths or paper towels , disposable gloves, non-oily soap, stoma measuring guide, scissors, new pouch ,accessory product ,plastic bag reveled that there are a highly significant difference improvement between pre ,post of implementing educational program, which is supported by (Ansari, 2018) (Deshpande2015) who stated that

ostomy clients gain a proper skills regarding gather supply after receiving an adequate education protocol.

Also, another of interest findings in the present study measures the stoma -care practices items regarding to apply the new pouch implementation phase pre and post educational program, these includes place the measure on the back trace the size within 1/8 inches, use scissors, put the pouch in the center, hold the pouch firmly, close pouch securely and fasten the pouch securely with clip. Reveled that there are a highly significant difference improvement.

Regarding the relation between all parts of stoma-care practices (assessment ,planning gather supply, implementation changing the appliance, evaluation and documentation the problems), the present finding indicated that there was a statistically significant improvement pre, post this results supported by (Ansari, 2018) in contract by(Gaber H *et al.*, 2015 who stated that there was no significant improvement between items of self-care practices overall total

practice score in pretest was poor mean = 39.84 with SD= 7.86, while posttest total practice score changed to good with mean =76.08 and SD=9.82. at P value= .001 so significant improvement occur as well. There was significance relation between area training and practice (p value=.009) and time of enrolled in training program and their practice (p value=.01) Summary Education program has a positive effective on nurses' performance regarding bowel stoma care successfully, so null hypothesis rejected and research hypotheses accepted.

## CONCLUSION

This study concluded that lack of the organized continuous training program is factors explaining their poor practice. And there was significant relationship between study group demographic data and their level of practice.

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