

ORIGINAL ARTICLE

The Structured Discharge Planning Towards Patient's Readiness In Performing Colostomy Care

Nurleli^{a*}, Roma Sitio^a, Rapitos Sidiq^b

^a Department of Nursing, Poltekkes Kemenkes Aceh, Jln. Tgk.H.Mohd.Daud Beureueh No.110 Lampriet Banda Aceh

^b Department of Health Promotion, Poltekkes Kemenkes Padang

* Corresponding Author: nurleli@poltekkesaceh.ac.id

ARTICLE INFORMATION

Article history

Received January 01, 2021

Revised June 15, 2021

Accepted July 20, 2021

Keywords

Colostomy care, Discharge planning, Patient's readiness

ABSTRACT

Introduction: Colostomy patients face major changes in various aspects that occur due to lack of knowledge, preoperative preparation and postoperative management. In addition, the implementation of discharge planning was generally in the form of a patient resume but does not evaluate the ability of patients and families to perform colostomy care independently.

Objectives: This study aims to determine the effectiveness of structured discharge planning on the readiness of patients undergoing colostomy care.

Methods: The descriptive-analytic study quasi-experimental approach post-test only with control group was designed to determine the effectiveness of structured discharge planning towards patient's readiness in performing colostomy care. Data collection was carried out for 20 colostomy patients selected accidentally. Data analysis was performed by independent t-test.

Results: The result found that patient's readiness in performing colostomy care was significantly increased in the intervention group (p-value 0.008).

Conclusion: The structured discharge planning which has been prepared at the beginning of the patient's hospitalization for colostomy patients' regarding stoma care was highly needed to optimize the ostomate in carrying out colostomy care independently.

Journal of Nursing is a peer-reviewed journal published by the School of Nursing at the Faculty of Health Science, University of Muhammadiyah Malang (UMM), and affiliated with the Indonesia National Nurse Association (INNA) of Malang.

This journal is licensed under the [CC-BY-SA](#)

Website: <http://ejournal.umm.ac.id/index.php/keperawatan>

E-mail: journal.keperawatan@umm.ac.id

1. Introduction

Colorectal cancer ranked as the second common form of cancer among Indonesian males, 19,113 cases (11.9%), after lung cancer in the first place. In women, colorectal cancer ranks the third most with 10,904 cases (5.8%), under the breast cancer and uterine cancer (Globocan, 2018). Increased cases of non-communicable diseases, including cancer, are related to lifestyle, such as smoking, alcohol consumption, lack of physical activity, and lack of fruits and vegetables consumption (Kemenkes RI, 2018). In certain conditions, surgical removal of malignant tumors in the colon and rectum is followed by making a hole (stoma) to divert the disposal of feces. According to the United Ostomy Association of American has estimated that more than 725,000-1,000,000 ostomates and more than 130,000 stomas are made each year to treat various diseases in the United States (UOAA, 2018). Although the number of ostomates has not been well recorded in Indonesia, the number of ostomates continues to increase from year to year. It can be seen from data found at the Indonesian Cancer Foundation and the Wocare Center which in 2007 the number of ostomates 361 and in 2014 increased to 675 (Iswari, A, 2018).

Ostomate face significant changes in various aspects of life both physical, psychological, social, and spiritual that affects the quality of life (Alwi et al., 2018; Susanty & Rangki, 2016). Physical changes that occur are changes in the place of disposal of feces, gas, and feces that normally comes out through the rectum into the abdominal wall. Someone with a stoma also decreases quality of life and results in stress. The most common problems encountered by

ostomates are leakage and peristomal infection (Davidson, 2016). Stoma can also reduce the quality of life. Ostomate experienced limitations in carrying out daily activities especially in worship activities for Muslims, disruption of marital relations and social life, having negative perceptions about colostomy for fear of leakage and embarrassment, economic and financial problems, increased necessities of life, changing patterns of rest, physical changes and risk of complications, and loss of normal life expectancy after a colostomy (Akgül & Karadağ, 2016; Alwi et al., 2018).

The emergences of various complications disrupt ostomate comfort. This condition occurs because the ostomate has not received proper learning in using a stoma bag and is aggravated by stoma complications. In this case, the implementation of discharge planning in the hospital for patients with colostomies about stoma care education and counseling is very important to prepare ostomate in psychosocial aspects and independence in carrying out their activities after surgery (Faury et al., 2017).

Discharge planning is a process that aims to help patients and families improve or maintain their health status. Discharge planning provides a significant effect in reducing disease complications and preventing recurrence. The process is conducted by ensuring that patients return home with appropriate care to reduce the length of stay and unintended return to the hospital (Gonçalves-Bradley et al., 2016). It was the fundamental consideration that someone who underwent colostomy must get assistance from a stoma nurse and get their rights as an ostomate to achieve an optimal quality of life.

Research conducted by (Pratiwi & Herlianita, 2010) regarding the analysis of knowledge about the concept of discharge planning in nursing students at the University of Muhammadiyah Malang found that 100% of respondents had less knowledge about discharge planning. Respondents assumed that discharge planning was only related to the client's administrative process when they were going home after receiving treatment from the hospital. However, discharge planning is not only given when the patient is declared to be allowed to go home. Discharge planning begins on the first day the patient is admitted to the hospital because the discharge planning given in a short time with restricted information does not guarantee the achievement of a change in the behavior of the patient and family (Darliana, 2012).

The nurse is a member of the discharge planner team. That functions to plan, coordinate, monitor, and provide ongoing treatment actions and processes. Nurses have an important role in the process of patient care and the hospital discharge planner team because nurses are with patients 24 hours. As well as the knowledge and abilities of nurses in the nursing process are very influential in providing continuity care through the process of discharge planning (Wulandari & Hariyati, 2019). The nurse not only provides health services to patients but also provides information and educates patients according to their conditions and needs (García-Goñi, 2019). This study aims to determine the effectiveness of structured discharge planning on the independence of patients undergoing colostomy care. The results found will provide a better understanding of nursing professionals and other health workers in preparing patients and families for ongoing care at home. The better the level of independence of patients undergoing colostomy and family surgery in the continuation of home care can reduce complications, prevent recurrence, and re-hospitalization.

2. Methods

This study was a quasi-experimental research design with a post-test only control group. Data collection was collected only at the end of the study after the treatment was completed to compare the effectiveness of structured discharge planning on the patients' readiness in performing colostomy care at the Regional General Hospital, dr. Zainoel Abidin Banda Aceh. Respondents in the study were obtained by accidental sampling in adult patients undergoing colostomy surgery, both temporary and permanent types. A total of 20 respondents, divided into 10 people in the intervention group and 10 for the control group. Prior to data collection, ethical

approval and permission were obtained from the hospital ethics committee. Written informed consent was also obtained from the respondents.

Data obtained through documentation and observation of the implementation of discharge planning conducted by nurses following the standards care for the control group. Furthermore, assessing the intervention group on discharge planning needs based on a structured discharge planning form that has been prepared. Discharge planning is a series of processes consisting of client selection, assessment, plan (intervention), community resources, implementation and evaluation. As the main implementation in the discharge planning is the provision of health education to the patients and families that aims to increase understanding and independence in dealing with the patient's health condition, and follow-up that must be done after the patient returns home (Slevin, 1986).

Provide structured discharge planning with the implementation of health education on how to care for colostomy and demonstrations that are guided by standard operational procedures that have been prepared for the intervention group. Then measure the respondents' readiness in conducting colostomy care independently. Whereas, in the control group only received standard discharge planning care, then the respondent's readiness to perform colostomy care independently was measured.

The data were normally distributed (p-value = 0.093), homogeneity of variance was equal (Levene's test = 0.066). Furthermore, the Independent t-test was used to look for differences in the patient's readiness in conducting colostomy care between the intervention group and the control group.

3. Results and Discussion

The results obtained from 20 respondents in Banda Aceh Regional Hospital are explained in three main sections: (1) Characteristics of respondents; (2) Readiness score of respondent in performing colostomy care; (3) differences in patient readiness in conducting independent colostomy care between the intervention group and the control group.

Table 1 Respondents Characteristics (n=20)

Variable	Intervention Group (n=10)		Control Group (n=10)		p-value
	Frequency	Percentage (%)	Frequency	Percentage (%)	
Age (Years)					
< 30	1	10	-	-	
30-40	1	10	-	-	
41-50	4	40	3	30	0,041*
51-60	3	30	5	50	
> 60	1	10	2	20	
Mean (SD) = 50,65 (9,455)					
Gender					
Male	6	60	7	70	1,000**
Female	4	40	3	30	
Religion					
Islam	10	100	10	100	-
Ethnicity					
Aceh	10	100	10	100	-
Marital Status					
Married	9	90	10	100	1,000**
Single	1	10	0	0	
Education					
University/College	2	20	1	10	0,148**
Middle School	7	70	4	40	
Primary School	1	10	5	50	

Variable	Intervention Group (n=10)		Control Group (n=10)		p-value
	Frequency	Percentage (%)	Frequency	Percentage (%)	
Occupation					
Civil Servant	1	10	1	10	0,962**
Self-employee	5	50	6	60	
Housewives	3	30	2	20	
Unemployee	1	10	1	10	
Colostomy Tipe					
Permanent	3	30	5	50	0,650**
Temporer	7	70	5	50	

* Independent t test; ** Chi-square

The characteristics of the respondents indicated an equality between respondents in the control group and the intervention group ($p > 0.05$), except for age. Twenty Colostomy Patients participated in this study were, on average, middle aged adult (mean age was 51 years). The highest percentage of both groups in the age range of 51-60 years (80%). In accordance with (Sander, 2012), who researched the profile of colorectal cancer at Hasan Sadikin Hospital Bandung, stated that colon and rectal cancers are commonly found in the fifth decade of life. However, it is quite different for gender, in this study the majority of respondents were male.

All respondents in this study are Acehnese and Muslim. Colostomy greatly influences Muslims in carrying out their worship such as prayer, fasting, as well as in terms of holiness, if they do not get adequate information and the inability to get adequate information. Research in Muslim countries conducted by Akgül & Karadağ, (2016) in Pakistan and research by Alwi et al., (2018) in Indonesia found that patients with colostomy experienced limitations in performing congregational prayers in mosques because they felt unacceptable and afraid of the smell coming out of the stoma. Feeling impure due to stoma hole was also a problem in religious rituals because Muslims emphasize to purify before worshiping and free from all impurities so that worship becomes valid. Belief and religion play an important role in the lives of patients with stoma because it can affect perceptions, attitudes, and behaviors towards illness. Therefore education about the spiritual needs of colostomy patients is needed.

Tabel 2 Patients' Readiness in Performing Colostomi Care in Control Group (n = 10)

Patients' Readiness Score	Frequency	Percentage (%)
5	1	10,0
6	1	10,0
7	3	30,0
8	2	20,0
9	1	10,0
12	2	20,0
Total	10	100

Mean (SD)= 8,10 (2,331)

Table above shows that the readiness of patients in performing colostomy care in the control group who received the standard of care has the average value of independence of 8.10.

Tabel 3 Patients' Readiness in Performing Colostomi Care in Intervention Group (n = 10)

Patients' Readiness Score	Frequency	Percentage (%)
9	1	10,0
10	5	50,0
11	2	20,0
12	2	20,0
Total	10	100

Mean (SD)= 10,50 (0,972)

Based on the table 3 shows that the highest readiness score of patients in performing colostomy care after getting structured discharge planning intervention was 12 (20%). While the lowest score was 9 with an average of patients' readiness was 10.50.

Tabel 4 The Effectiveness of Structured Discharge Planning towards Patients' Readiness in Performing Colostomy Care (n1 = 10; n2 = 10)

	Mean	SD	Min-Maks	OR (95% CI)	t	p-value
Intervention Group	10,5	0,972	9-12	1.000 (.112-8.947)	3,005	0,008
Control Group	8,1	2,331	6-12			

Based on table 4 above found that there were significant differences between the control group and the intervention group after being given structured discharge planning for the independence of patients in performing colostomy care at RSUD dr. Zainoel Abidin Banda Aceh (p-value 0.08).

The results showed significant differences in the independence of patients in performing colostomy care between the the control group and intervention group after structured discharge planning administration by providing education on colostomy care using multimedia such as leaflets, video, and demonstrations. Stoma patients received a structured multimedia education program escalated knowledge and ability of independent colostomy care, quality of life, prevention of complications, and positive body image compared to patients who do not participate in the program (Danielsen & Rosenberg, 2014; Shereen & Maha, 2019). Stoma education given before and after surgery and follow-up to patients with a colostomy is important to improve self-care abilities and be able to adapt to the body image changed and post-colostomy conditions (Goldberg et al., 2018).

The successful of the structured discharge planning implementation is also related to the acceptance of the disease and the quality of life of colostomy patients. Respondents in this study were dominant in the age ranged 51-60 years (80%). The majority were male (65%) with middle school education. In line with Szpilewska et al., (2018) who found that several factors affected the quality of life and acceptance of conditions in colostomy patients were gender and education. Men have a better acceptance of stoma than women. Likewise, patients with lower education were better at receiving the stoma and their conditions. They tend to be able to get through a better recovery period because they had fewer negative emotions. From this psychological perspective, acceptance of disease was an important aspect of therapy and supporting adaptation when difficult situations occurred.

Colostomy seen as a burden that can affect the quality of life in many dimensions. Patients feel uncomfortable, embarrassed, painful, anxious, and other problems (Susanty & Rangki, 2016). Stoma complications make the patients return to the hospital with the same disease or develop a more severe complaints (Goldberg et al., 2018). Health care provider sometimes fail to assess whether the information provided in the discharge planning program is well understood by patients. Lack of presentation, time, and frequency of learning in conveying information lead to the failure of recovery management after discharge and reduce patient participation in self-care (Kang et al., 2018).

The results in this study showed that after the administration of structured discharge planning, there were significant differences in the patient's independence in performing colostomy care (p-value 0.008). In line with the opinion of (Burch, 2011), that colostomy patients should be taught how to manage their colostomy from the very beginning of formation, that is, when they were still in the hospital. So when patients leave the hospital they can perform colostomy care independently. The evidence-based analysis stated that discharge planning had a significant effect on relapse prevention, reduced length of stay, improved quality of life, and the

level of patient satisfaction (McMartin, 2013). Discharge planning for colostomy patients on stoma education and counseling is very important to prepare independent ostomates in their activities after surgery.

The importance of education provided by nurses to stoma patients is also stated in the García-Goñi study, which evaluates the impact of stoma nurses providing education to patients with a stoma. The results of the study found that stoma patients who received information and education from nurses about their condition and needs showed a decrease in complications, had a good level of independence, and a better quality of life. Patients with stoma should be told and taught how to treat their stoma to avoid adverse effects and unnecessary complications (García-Goñi, 2019). Having good knowledge and independence in stoma care will also improve psychosocial adjustments for stoma patients. Providing education that teaches about self-care before discharge from the hospital can help patients with colostomy adapt to social life activities and self-management so that it can improve the quality of life (Cheng et al., 2013; Faury et al., 2017).

Comprehensive discharge planning should be undertaken in the management of patients with a colostomy. That could be succeeded by providing health education in order to change the behavior of patients and families in preventing complications. Education includes teaching how to treat stomas (how to empty and replace colostomy bags, how to get the tools needed, instructions on diet and fluids, and potential complications, drugs, and how to handle odors and gases), help in the transition of treatment, and provide information about the support and assistance that could be obtained by patients (Prinz et al., 2015).

Assessing patient preparation for discharge is an important component in the process of discharge planning. The provision of structured education enhances the knowledge and attitudes of patients and families in performing colostomy care (Kadam & Shinde, 2014). Education tailored to the learning needs of patients that use numerous media delivered through various levels to improves overall patient knowledge and the success of post-discharge recovery (Kang et al., 2018). One way to improve patient knowledge is by providing education as a structured discharge planning implementation. Research in the Philippines in patients with heart disease, states that structured discharge planning led by nurses were an effective intervention to improve patient health status, self-efficacy, patient satisfaction, and reduce patient acceptance in hospitals (Cajanding, 2015). Providing education was carried out by health professionals by actively involving patients in overcoming their health problems. Effective health education programs and strategies can lead to better health outcomes, especially helping individuals to gain more knowledge and skills.

4. Conclusion

The results of this study about the effect of structured discharge planning in colostomy patients at the General Hospital dr. Zainoel Abidin Banda Aceh found that there was an increase in the patients' readiness in performing colostomy care compared to the control group that only received standard care (p-value 0.08). This study recommends that health care providers in conducting nursing care should assess the needs of colostomy patients in more detail to prepare information and skills about self-care. Involve the participation of patients and families as a source before and after undergoing colostomy surgery so that there will be better sustainability of care. The health service center should establish policies that are more directed to the health education process about the importance of setting guidelines on discharge planning. That can be used as a guideline for nurses and other health professionals to improve patient readiness in conducting colostomy care independently.

Ethics approval and consent to participate

This study has obtained research ethics approval by Komisi Etik Penelitian Kesehatan Fakultas Kedokteran Universitas Syiah Kuala- Rumah Sakit Umum Daerah dr. Zainoel Abidin with number: 221/EA/FK-RSUDZA/2019.

Acknowledgments

The researcher would like to acknowledge the Poltekkes Kemenkes Aceh for research funding. Also, special thanks to the Director of RSUD dr. Zainoel Abidin Banda Aceh and all of the respondents enrolled in this study.

References

- Akgül, B., & Karadağ, A. (2016). The effect of colostomy and ileostomy on acts of worship in the islamic faith. *Journal of Wound, Ostomy and Continence Nursing*, 43(4), 392–397. <https://doi.org/10.1097/WON.0000000000000237>
- Alwi, F., Setiawan, & Asrizal. (2018). Quality of life of persons with permanent colostomy: a phenomenological study. *Journal of Coloproctology*, 38(4), 295–301. <https://doi.org/10.1016/j.jcol.2018.06.001>
- Burch, J. (2011). Resuming a normal life: Holistic care of the person with an ostomy. *British Journal of Community Nursing*, 16(8), 366–373. <https://doi.org/10.12968/bjcn.2011.16.8.366>
- Cajanding, R. J. (2015). Effects of a structured discharge planning program on perceived functional status, cardiac self-efficacy, patient satisfaction, and unexpected hospital revisits among Filipino Cardiac Patients: A Randomized Controlled Study. *Journal of Cardiovascular Nursing*, 32(1). <https://doi.org/10.1097/JCN.0000000000000303>
- Cheng, F., Meng, a F., Yang, L. F., & Zhang, Y. (2013). The correlation between ostomy knowledge and self-care ability with psychosocial adjustment in China. *Ostomy Wound Management*, 59(7), 35.
- Danielsen, A. K., & Rosenberg, J. (2014). Health related quality of life may increase when patients with a stoma attend patient education a case-control study. *PLoS ONE*, 9(3), 1–6. <https://doi.org/10.1371/journal.pone.0090354>
- Darliana, D. (2012). Discharge Planning Dalam Keperawatan. *Idea Nursing Journal*, 3(2), 32–41.
- Davidson, F. (2016). Quality of life, wellbeing and care needs of Irish ostomates. *British Journal of Nursing*, 25(17), S4–S12. <https://doi.org/10.12968/bjon.2016.25.17.S4>
- Faury, S., Koleck, M., Foucaud, J., Bailara, K. M., & Quintard, B. (2017). Patient education interventions for colorectal cancer patients with stoma: a systematic review. *Patient Education and Counseling*. <https://doi.org/10.1016/j.pec.2017.05.034>
- García-Goñi, M. (2019). Specializing nurses as an indirect education program for stoma patients. *International Journal of Environmental Research and Public Health*, 16(13). <https://doi.org/10.3390/ijerph16132272>
- Globocan. (2018). *Cancer Fact Sheet*. International Agency for Research on Cancer, World Health Organization. <http://gco.iarc.fr/today/data/factsheets/populations/360-indonesia-factsheets.pdf>
- Goldberg, M., Colwell, J., Burns, S., Carmel, J., Fellows, J., Hendren, S., Livingston, V., Nottingham, C. U., Pittman, J., Rafferty, J., Salvadalena, G., Steinberg, G., Palmer, R., & Bonham, P. (2018). WOCN Society Clinical Guideline: Management of the Adult Patient With a Fecal or Urinary Ostomy—An Executive Summary. *Journal of Wound, Ostomy and Continence Nursing*, 45(1), 50–58. <https://doi.org/10.1097/WON.0000000000000396>
- Gonçalves-Bradley, D. C., Lannin, N. a., Clemson, L. M., Cameron, I. D., & Shepperd, S. (2016). Discharge planning from hospital. *Cochrane Database of Systematic Reviews*, 2016(1). <https://doi.org/10.1002/14651858.CD000313.pub5>
- Iswari, A, G. (2018). Kanker Kolorektal. *Buletin Yayasan Kanker Indonesia*, 2(April), 1–54.

- Kadam, A., & Shinde, M. B. (2014). Effectiveness of structured education on patient's knowledge and practice regarding colostomy care. *International Journal of Science and Research*, 3(4), 587–593.
- Kang, E., Gillespie, B. M., Tobiano, G., & Chaboyer, W. (2018). Discharge education delivered to general surgical patients in their management of recovery post discharge: A systematic mixed studies review. *International Journal of Nursing Studies*, 87(February), 1–13. <https://doi.org/10.1016/j.ijnurstu.2018.07.004>
- Kemendes RI. (2018). *Hasil Utama Riset Kesehatan Dasar (RISKESDAS)*. https://kesmas.kemkes.go.id/assets/upload/dir_519d41d8cd98f00/files/Hasil-riskesdas-2018_1274.pdf
- McMartin, K. (2013). Discharge planning in chronic conditions: An evidence-based analysis. *Ontario Health Technology Assessment Series*, 13(4), 1–72.
- Pratiwi, I. D., & Herlianita, R. (2010). Analisis pengetahuan konsep discharge planning mahasiswa keperawatan Universitas Muhammadiyah Malang. *Jurnal Keperawatan*, 1, 97–102. <https://doi.org/https://doi.org/10.22219/jk.v1i2.401>
- Prinz, A., Colwell, J. C., Cross, H. H., Mantel, J., Perkins, J., & Walker, C. a. (2015). Discharge planning for a patient with a new ostomy: Best practice for clinicians. *Journal of Wound, Ostomy and Continence Nursing*, 42(1), 79–82. <https://doi.org/10.1097/WON.0000000000000094>
- Sander, M. A. (2012). *Profile of colo-rectal cancer at Hasan Sadikin Hospital Bandung*. <https://doi.org/https://doi.org/10.22219/jk.v3i1.1048>
- Shereen, A. Q. A., & Maha, M. M. M. (2019). Effectiveness of a multimedia educational package for cancer patients with colostomy on their performance, quality of life & body image. *International Journal of Nursing Science*, 9(3), 53–64. <https://doi.org/10.5923/j.nursing.20190903.01>
- Slevin, A. P. (1986). A model for discharge planning in nursing education. *Journal of Community Health Nursing*, 3(1), 35–42. https://doi.org/10.1207/s15327655jchn0301_5
- Susanty, S., & Rangki, L. (2016). Changes and adaptation patient post colostomy. *IOSR Journal of Nursing and Health Science*, 5(6), 123–129. <https://doi.org/10.9790/1959-050601123129>
- Szpilewska, K., Juzwizsyn, J., Bolanowska, Z., Bolanowska, Z., Milan, M., Chabowski, M., & Janczak, D. (2018). Acceptance of disease and the quality of life in patients with enteric stoma. *Polish Journal of Surgery*, 90(1), 13–17. <https://doi.org/10.5604/01.3001.0011.5954>
- UOAA. (2018). *Living with an Ostomy | United Ostomy Associations of America*. <https://www.ostomy.org/living-with-an-ostomy/>
- Wulandari, D. F., & Hariyati, R. T. S. (2019). Optimizing the implementation of discharge planning in the General Hospital Jakarta. *International Journal of Nursing and Health Services (IJNHS)*, 2(1), 70–81. <https://doi.org/10.35654/ijnhs.v2i1.72>