**The effect of health education on the capabilities of colon cancer patients installed**

**colostomy stoma care**

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**Abstract**

**Background**: Colon cancer, also known as colon cancer, is cancer in the colon or rectum. The colostomy is a surgically made hole in the large intestine that allows feces to flow in a pouch on the abdominal wall. Colostomy actions can affect the patient's physical and psychological changes. This happens because physically there are changes in defecation patterns, diet, bag use, skin care around the stoma, odor, and so on. Most complications occur at home. Prevention is the main key, early detection can catch serious complications.

**Purpose**: To determine the effect of health education on the ability of colon cancer patients with colostomy in stoma care at MRCCC Siloam Hospital Semanggi.

**Method**: The research design was quasi-experimental with a one-group pre and post-test design. The sample in this study was 16 respondents taken using a purposive sampling technique. The research instrument used a knowledge questionnaire and skills observation. Data analysis used the Wilcoxon Signed Ranks Test.

**Results**: The results of the Wilcoxon Signed Ranks Test obtained a p-value of 0.000 (p <0.05) which means that Ho is rejected and Ha is accepted, which means that there is an effect of health education on the ability of colon cancer patients to have a colostomy in stoma care at the Siloam MRCCC Hospital Clover.

**Conclusion**: There is an effect of health education on the ability of colon cancer patients with a colostomy in the care of the MRCCC Siloam Semanggi Hospital.

**Keywords: Health education; Capabilities of colon cancer patients; Colostomy stoma care.**

**INTRODUCTION**

Data from GLOBOCAN 2020, shows that new cases of colorectal cancer worldwide amounted to 1,931,590 (10%) of all types of cancer in the world, making colorectal cancer in third place after breast cancer 2,261,419 (11.7%) in first place and Lung cancer 2,206,771 (10%) is in second place. The order of colorectal cancer increased from the previous year which was in fourth place. The position of colorectal cancer in Indonesia based on GLOBOCAN 2020 data is in fourth place with an incidence reaching 34,783 (8.8%) patients, where the number of male sufferers reached 21,764 (11.9%) and the number of female sufferers 12,425 (5.8%).

A colostomy is a hole made surgically in the large intestine that allows feces to be expelled (without going through the rectum), i.e. flowing into a bag or other collection device. In the UK it is estimated that between 80,000 and 100,000 people have an ostomy. The majority of colostomy patients are over 50 years old with colorectal cancer. Possible complications in general are shock, bleeding, respiratory problems, digestive disorders, urinary disorders, wounds, sepsis, psychological problems, and complications. Peristomal skin complications (skin around the ostomy stoma) can occur up to 80% after surgery. These complications include erythema and leakage, irritant contact dermatitis, eczema/allergic contact dermatitis, folliculitis, epidermal pseudo verrucous, hyperplasia, dermatological diseases, and certain wounds. Most complications occur at home. Prevention is the main key, early detection can cause serious complications (Maryunani & Haryanto, 2016).

Health education in hospitals (PKRS) has the principle of developing the patient and family's understanding of the disease they are suffering from, health promotion in hospitals has the principle of empowering patients and families so that they are better able to act and behave in a preventive, promotive manner in the future. Patients with chronic diseases can show different reactions such as apathy, aggression, or withdrawal. Nurses are tasked with providing health education to clients to create individual or community behavior (Kustin, 2020).

Discharge planning aims to increase the efficiency and quality of health service delivery by shortening the length of treatment, and facilitating clients in the process of moving from hospital to home care or other health services. Provide information about disease conditions and post-hospitalization treatment to clients. Discharge planning can increase self-efficacy in patients and families thereby improving the patient's quality of life by reducing the recurrence rate by 60.8% (Rahayu, 2020).

Mochtar Riady Comprehensive Cancer Center (MRCCC) Siloam Semanggi Hospital is located in South Jakarta. MRCCC Siloam Semanggi Hospital is the first private hospital in Indonesia that specializes in cancer treatment and provides a variety of health services, ranging from early cancer detection, surgical oncology, chemotherapy, and radiotherapy as well as various cancer treatment and management facilities. Based on a preliminary study on October 31, 2022, from medical records, it was recorded that data on colorectal cancer patients from 2016-2022 in September experienced an increase every year. In 2016 the number of patients with colorectal cancer was 119 patients, in 2017 there were 171 patients, in 2018 there were 222 patients, in 2019 there were 258 patients, in 2020 there were 264 patients, in 2021 there were 303 patients and in 2022 from January to In September the number of patients was 297 patients. The increasing prevalence of colorectal cancer is directly proportional to the increase in patients undergoing colostomy creation therapy. The following is data on patients who had a stoma made on the abdominal wall in the operating room at the MRCCC Siloam Semanggi Hospital in 2016 as many as 1 patients, in 2017 as many as 8 patients, in 2018 as many as 10 patients, in 2019 as many as 7 patients, in 2020 as many as 13 patients, in 2021 there were 27 patients and from January to September 2022 the number of patients who had a colostomy made was 32 patients. MRCCC Hospital also accepts referral patients from other hospitals who have a colostomy installed for radiotherapy or chemotherapy so the number of patients with a colostomy is increasing.

Based on the background obtained above, researchers are interested and feel it is necessary to conduct research with the title "The Effect of Health Education on the Ability of colon cancer patients with colostomy implants in stoma care at the MRCCC Siloam Semanggi Hospital" for the period 2023.

**RESEARCH METHODOLOGY**

The research design used in this research is quasi-experimental with a one-group pre and post-test design. This research design involves one group of subjects who will measure the patient's ability to care for the stoma before and after being given health education treatment by the researcher. This design aims to reveal the possible influence of health education on the ability of colon cancer patients with a colostomy in stoma care at the MRCCC Siloam Semanggi Hospital. This research uses purposive sampling or judgment sampling. From this study, samples were obtained from secondary data taken from December 2022 until January 2023. The research inclusion and exclusion criteria were 16 people and was on the advice of Gay and Dielh (1992) who suggested a minimum of 15 subjects per group in experimental research. This study uses a purposive sampling technique, this research was conducted at the MRCCC Siloam Semanggi Hospital 2023.

**Table 1. Distribution of Characteristics of colon cancer patients with a colostomy at the MRCCC Siloam Semanggi Hospital (N=16)**

|  |  |
| --- | --- |
| Variable | Result |
| Age (%) (Mean ±SD)(Range)(Year)  | **(51,37±13,83. 16)(20-73)** |
|  |  |
| Sex |  |
| Male | 10/62,5 |
| Female | 6/37,5 |
|  |  |
| Religion |  |
| Mosleam | 9/56,3 |
| Protestan | 3/18,8 |
| Katolik. | 4/25,0 |
|  |  |
| Education |  |
| Elementary school | 2/12,5 |
| First high school | 3/18,8 |
| Junior high school | 7/43,8 |
| Bechelor | 4/25,0 |
|  |  |
| Jobs |  |
| PrivateOfficer | 4/25,0 |
| House wife | 3/18,8 |
| Pension | 3/18,8 |
| BUMN | 2/12,5 |
| Trader | 2/12,5 |
| Farmer | 1/6,3 |
| No jobs | 1/6,3 |

**Table 2. Distribution Frequency of patients' abilities in stoma care before being given health education**

|  |  |
| --- | --- |
| Capable  | Result |
| Ability |  |
| Capable | 2.12,5 |
| Les fortunate  | 12/75,0 |
| Not Capable | 2/12,5 |

**Table 3. Frequency distribution of patients' abilities in stoma care after being given health education**

|  |  |
| --- | --- |
| Capable  | Result |
| Ability | 16/100,0 |

It can be seen that characteristic responses are The age of the patients in this study was 20 years old the upper limit was 73 years old and the average age of the patients was 51 years old with data distribution (SD) = 13.83173. The gender of patients in the male category was 10 people (62.5%), and in the female category there were 6 people (37.5%). Characteristics of the patient's religion are that there are 9 patients with the Islamic religion (56.3%), 3 people with the Protestant religion (18.8%), and 4 people with the Catholic religion (25%). The final educational characteristics of the patients were that there were 2 patients with elementary education levels (12.5%), 3 people with junior high school education levels (18.8%), 7 people with high school education levels (43.8%), and 4 people with bachelor's levels. (25.5%). The characteristics of the patient's work are that 4 patients are working as private employees (25.0%), 3 housewives (18.8%), 3 retirees (18.8%), 2 working in BUMN. people (12.5%), traders numbering 2 people (12.5%), farmers numbering 1 person (6.3%) and not working or not yet working totaling 1 person (6.3%).

The results of the research before the intervention (pretest) were that the majority of patients had poor ability in stoma care as many as 12 patients (75.0%), were unable as many as 2 patients (12.5%) and were able to care for stoma as many as 2 people (12.5%) and result of the study after being given intervention (posttest) by the researchers showed that the patient's ability to care for the stoma was within the capable parameters of 16 patients (100.0%).

**Table 2. Test Results of the Effect of Health Education on the Ability of Colon Cancer Patients with Colostomy Installations to Care for Stoma at Home at MRCCC Siloam Semanggi Hospital**

|  |  |  |
| --- | --- | --- |
| Variable | Mean ± SD | p-value |
| Before | 19.93 |  |
| During | 38.37 | 0.000 |

There were 16 patients in this study with an average pretest result score of 19.9375 with a lower limit value of 12.00 and an upper limit value of 37.00, while the average posttest result value after being given the health education intervention increased to 38.3750 with a lower limit value of 34.00 and the upper limit value has increased to 34.00. The results of the Wilcoxon Signed Ranks Test showed a significance value of p = 0.000 (<0.05), which means that there is an influence of health education on the ability of ca.colon patients with a colostomy to care for their stoma at home.

**DISCUSSION**

In this study, 16 respondents met the inclusion and exclusion criteria, with the gender characteristics of the respondents being known, the majority of whom were male, 10 people (62.5%) and female, 6 patients (37.5%). This is in line with research by S. M. Rahayu (2023) entitled "The relationship between age and gender factors and the incidence of colorectal cancer at Cut Meutia General Hospital in 2020" which shows that the majority of colorectal cancer patients were male, 18 patients. (60%) compared with 12 female patients (40%) and the results of the analysis showed a p-value <0.001, which means there is a relationship between gender and the incidence of colorectal cancer. The rate of colorectal cancer in men is higher than in women because men consume more cigarettes and cigarette consumption is a risk factor for colorectal cancer, where the substances in cigarette tobacco have a carcinogenic effect which can trigger cancer of the colon and rectum. The incidence of colorectal cancer in men is related to estradiol levels. Estradiol in normal amounts functions in spermatogenesis and fertility. The amount of estradiol will reduce the secretion of testosterone, high testosterone reduces the risk of colorectal cancer.

The results of Bouk's research (2021) on the topic "risk factors associated with the incidence of colorectal cancer at RSUD Prof. DR. W.Z. Johannes Kupang" obtained the results that there is no significant relationship between age and the incidence of colorectal cancer. This is because the opportunity for colorectal cancer not only occurs at ages > 50 years but also occurs at ages < 50 years which can be caused by genetic factors, poor pattern of life such as a diet low in fiber and fruit, excessive consumption of red meat and saturated fat, lack of physical activity, smoking, and alcohol.

Characteristics of respondents based on work consisted of private employees as many as 4 patients (25%), housewives as many as 3 patients (18.8%), retirees as many as 3 patients (18.8%), working in BUMN as many as 2 people (12.5 %), 2 patients were traders (12.5%), 1 person was a farmer (6.3%) and 1 person did not/hadn't worked (6.3%). The results of this study indicate that colon cancer patients in this study are patients who actively work so this research results contradict Majid's (2020) research which states that physical activity provides a protective effect against colorectal cancer as shown in the research results by the highest number of respondents. many in the inactive category amounting to 46 (82.1%) of the total sample. One of the protective mechanisms for physical activity is through the mechanisms of immunity and intestinal performance.

According to the researcher's assumptions, the results of the characteristics in this study show that the majority of respondents who had colorectal cancer were male. Still, the researchers could not conclude that this gender had a relationship because the researchers did not ask about smoking or not smoking. The characteristics of the respondents' average age of 51 could be due to a decline in the body's immune system so that respondents who have never had regular health checks will find themselves sick in old age because they are late in carrying out early detection examinations. From an educational perspective, researchers assume that educated patients will find it easier to master new knowledge and skills. Job characteristics can be a supporting factor in the incidence of colorectal cancer due to high levels of activity so respondents pay less attention to the nutrition they consume and lack of rest patterns.

The test results on the influence of the patient's ability before and after being given the stoma care health education intervention obtained a p-value of 0.000 (p<0.05), which means that Ho is rejected. Ha is accepted, which means that there is an influence of health education on the ability of ca. colon patients with a colostomy. in-home stoma care The results of this research are in line with research conducted by Pratiwi (2021) with the topic "The influence of education about Diarrhea using Leaflet media on the level of knowledge of mothers in preventing diarrhea in toddlers at the Wonoasih Community Health Center, Problinggo City" obtained results for the intervention and control groups Sig 0.001 <0, 05 so that Ha is accepted, which means there is an influence of education about diarrhea using leaflet media on the level of knowledge of mothers in preventing diarrhea in toddlers at the Wonoasih Community Health Center, Probolinggo City in the intervention and control groups.

Based on the process and results of this research, the researcher assumes that there is an influence of health education on the ability of ca. respondents so that respondents gain new skills and these skills will increase every day to become an ability because respondents carry out stoma care every day.

**CONCLUSION**

There is an influence of health education on the ability of colon cancer patients with a colostomy to care for their stoma at the MRCC Siloam Semanggi Hospital.

**REFERENCES**

Bakri, A., Irwandy, F., & Linggi, B. E. (2020). Pengaruh Pendidikan Kesehatan Tentang Perawatan Pasien Stroke di Rumah Terhadap Tingkat Pengetahuan Keluarga. *Jurnal Ilmiah Kesehatan Sandi Husada*, 11, 1–7.

Bouk, E. A. L. (2021). Faktor Risiko yang Berhubungan dengan Kejadian Kanker Kolorektal di RSUD Prof. DR.W.Z.Johannes *Kupang Cendana Medical Journal.*

Budipramana, V. S. (2020). Perawatan Stoma untuk Meminimalkan Komplikasi. Airlangga University Press.

Donsu, J. D. T. (2016). *Metodologi Penelitian Keperawatan*. Pustaka Baru Press.

Hidayat, A. A. (2007). *Riset Keperawatan dan Teknik Penulisan Ilmiah*. Salemba Medika.

IARC, I. A. for R. on C. (2020). *Cancer Today: Data visualization tools for exploring the global cancer burden in 2020*. Https://Gco.Iarc.Fr/

Jiwantoro, Y. A. (2017). *Riset Keperawatan Analisis Data Statistik Menggunakan SPSS*. Mitra Wacana Media.

Karenina, R. K. (2019). *Pengaruh Edukasi Terhadap Kemampuan Keluarga Dalam Perawatan Stoma pada Pasien yang Mengalami Kolostomi di RSUP. H. Adam Malik Medan*. Poltekkes Kemenkes Medan, 1.

Khalid, A. (2014). *Promosi Kesehatan: Dengan Pendekatan Teori Perilaku, Media dan Aplikasinya*. Rajawali Pers.

Komariah, E. (2018). Pengaruh pendidikan kesehatan mengenai perawatan ibu postpartum dengan seksio sesari Terhadap kemampuan merawat diri di RSUD Dr. Soekardjo Kota Tasikmalaya. *Kesehatan Bakti Tunas Husada: Jurnal Ilmu-Ilmu Keperawtatan, Analis Kesehatan Dan Farmasi.*

Kustin. (2020). *Pendidikan dan Promosi Kesehatan (1st ed.).* Graha Ilmu.

Majid, R. S. (2020). Detereminan Kejadian Kanker Kolorektal (Studi Kasus Kontrol pada Pasien di Rumah Sakit Kanker Dharmais). *Jurnal Kesehatan Masyarakat*, 9.

Maryunani, A., & Haryanto. (2016). *Perawatan Stoma Terkini (Modern Stoma Care)* (P. Lestari Puji, Ed.; 1st ed., Vol. 1, pp. 1–226). Salemba Medika.

Muhammad, F. (2021). *Gambaran Kecemasan pada Pasien dengan Post-Operasi Kolostomi di RS PMI Kota Bogor*. Poltekkes Kemenkes Bandung.

Nainggolan, E. S. (2012). *Pengaruh Edukasi terhadap Kemampuan Keluarga dalam Perawatan stoma pada Anggota Keluarga yang mengalami Kolostomi di Rindu B Ruang 2A RSUP*. H. Adam Malik Medan. Universitas Sumatera Utara.

Notoadmodjo, S. (2014). *Promosi Kesehatan dan Perilaku Kesehatan*. Rineka Cipta.

Nurdin, S. U. (2019). *Serat Pangan dan Kanker Kolon (1st ed.).* Graha Ilmu.

Panata, J. (2018). *Aku Perawat Komunitas*. Gava Media.

Pinzon, T. R., & Retno, W. D. (2021). *Metodologi Penelitian*. Penerbit Andi.

Potter, A. P., & Anne, G. P. (2009). *Fundamental Keperawatan (7th ed.).* Salemba Medika.

Prabowo, S. (2019). *Kenali Kanker Usus Besar (Kolorektal) sejak Dini (I).* Rapha Publishing.

Pratiwi, P. M. (2021). Pengaruh Edukasi Tentang Diare Dengan Menggunakan Media Leaflet Terhadap Tingkat Pengetahuan Ibu Dalam Pencegahan Diare pada Balita Di Puskesmas Wonoasih Kota Probolinggo. *Jurnal Keperawatan Muhammadiyah*, 6.

Quraisy, A. (2020). Normalitas Data Menggunakan Uji-Kolmogorv-Smirnov dan Shapiro-Wilk. *J-HESTFDI DPD Sulawesi Barat.*

Rahayu, D. C. (2020). *Meningkatkan Kualitas Discharge Planning Melalui Coaching Keperawatan (I).* Literasi Nusantara.

Rahayu, S. M. (2023). Hubungan Antara Faktor Risiko Usia dan Jenis Kelamin dengan Kejadian Kanker Kolorektal di Rumah Sakit Umum Cut Meutia Pada Tahun 2020. *Jurnal Ilmiah Manusia dan Kesehatan*, 6.

Risdianti, H. (2022). Pengaruh Pendidikan kesehatan terhadap pengetahuan pertolongan pertama hipoglikemia pada penderita Diabetes melitus. *Jurnal Ilmiah Wijaya*, 14.

Sembiring, B. T. (2022). Pengaruh Edukasi Self Care Terhadap Kualitas Hidup Ostomate Di Wocare Center Bogor. *Manuju: Malahayati Nursing Journal,* 4.

Stephen, P. R., & Timothy, A. J. (n.d.). *Perilaku Organisasi*. Salemba.

Suliani, W. N. (2017). *Pengaruh Pendidikan Kesehatan tentang Keseimbangan Diit Terhadap Perubahan Konsistensi Faeces Pada Pasien dengan Stoma di Rumah Sakit Medistra Jakarta. Program Studi Magister Keperawatan Medikal Bedah STIK Sint Carolus.*

Syam, Y., Sjattar, E. L., Majid, A., & Saleh, A. (2019). Support Edukasi Dengan Digital Storytelling Terhadap Peningkatan Self Care Ostomate di Makassar Tahun 2019. *Jurnal Kesehatan Masyarakat Maritim.*

Widyawati. (2020). *Pendidikan dan Promosi kesehatan untuk Mahasiswa Keperawatan*. Sekolah Tinggi Ilmu Kesehatan Binalita Sudama Medan.

Wulandari, T. (2018). *Pengaruh pendidikan kesehatan Terhadap perubahan tingkat kemampuan keluarga dalam perawatan halusinasi di Wilayah kerja Puskesmas Geger Kabupaten Madiun*. Program Studi Keperawatan Stikes Bhakti Husada Mulia Madiun.