Effect of Self Care Educational Instructions on Quality of Life among Colostomy Patients

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Abstract

Background: The patient's quality of life is significantly impacted by colostomy, which significantly modifies their image, personal sanitation, and excretory function. Additionally, it erodes their self-esteem and limits their ability to manage daily life. **Aim:** Assess the influence of self-care educational instructions on the quality of life of colostomy patients. **Design:** Quasi experimental research design was used. **Setting:** the study conducted at oncology hospital and surgical outpatients' clinic at Tanta University. **Subjects:** A Purposive sampling of 60 colostomy Patients. **Tools:** Four tools were used. **Tool I**: Colostomy Self-Care Knowledge Questionnaire. **Tool II**: Ostomy Self-Care Index Scale.**Tool III:** Observational Checklist for Colostomy Self-care Practices, **Tool IV:** Stoma Quality of Life Index Scale. **Results:** The main results revealed that were a highly statistical significant improvement in total self-care knowledge level (73.3%), total self-care practice (86.7%) and total score level of stoma quality of life (80%) of the study group post implementation of self-care educational instruction. **Conclusion:** Quality of life, post-self-care educational instructions, and colostomy self-care knowledge, practices, and OSCI were all significantly positively correlated (r.0.298, r.0.517, r.0.497) **Recommendation:** Replication of the study with larger sample in different settings is required for generalization of the results.

Keywords: Colostomy Patients, Quality of Life, Self-Care Instructions.

Introduction

In recent years, there has been a worldwide rise in the number of individuals who have colostomy. Stoma, colostomy, or ostomy appliance refers to the artificial opening that is created after a colostomy surgical procedure.

This opening is used to interrupt the natural bowel bath. Residue, rather than liquid, should be discharged from the large intestine (colon) through this stoma type **(Keng et al., 2021).**

Complications associated with colostomy may manifest as systemic or local, intermittent or progressive, and may emerge at an early or late stage. Damage to the surrounding tissue, infection of the wound, parastomal hernia, parastomal abscess, stenosis, erosion, peristomal skin irritations, stomal necrosis, tissue growth, prolapse, retraction, and hemorrhage are all possible local consequences. The potential consequences of systemic complications include electrolyte imbalances, malnutrition, weight loss, and even mortality. A well-prepared patient, skilled surgeon, and enhanced rehabilitation all work together to lessen the likelihood of complications during surgery **(Haque et al., 2021)**.

Stomas, which are a form of physical impairment or deformity, are particularly problematic due to the high prevalence of surgical complications in colostomy patients. There has been a rise in the focus on colostomy patient education and nursing interventions because of the societal pressures that stoma patient's experience, which have an effect on their physiology, psyche, and QoL **(Chen & Ning, 2019)**.

Patients and caregivers are to be empowered to change their health behaviors and improve their health and quality of life, the health education protocol is necessary **(Davis et al., 2020; Eskicioglu et al., 2021).**

Individual's subjective perception of physical, social, and psychological well-being is articulated by the multidimensional construct of quality of life. Colostomy patients' quality of life may be impacted by a variety of symptoms, including skin irritation, leakage, electrolyte imbalances, appliance malfunctions, frequent appliance replacements, altered body image, loss of control over fecal and flatus excretion, and skin irritation **(Climent et al., 2022).**

Numerous factors impact an individual's quality of life. These include emotional and physical well-being, autonomy, social support, personal views, and proximity to significant environmental factors. **(Abd El-Aal et al., 2020).**

Individuals' adaptation to disease, self-care, and independence are significantly influenced by their education. Patients' education has the potential to decrease hospital stay periods, postoperative problems, and readmissions. Health behaviors are

altered by education, which results in a more comprehensive comprehension of the disease and a reduction or postponement of health complications **(Ahmadi et al., 2023).**

Patients who are adapting to live with a stoma rely heavily responsibility on clinical nurses to provide health education. Proper appliance, skin care, changing dressings, replacing bags or adapters, and other technical skills needed for colostomy care and incontinence should be the major focus of health education. In addition, nurses should encourage patients to take an active role in making decisions about the plan of care and treatment, tailor daily activity educational programs to patients' social lives, and develop education resources that align with the protocol of care **(Winnicki, 2023).**

Patients are instructed on how to autonomously maintain the stomas as part of the stoma self-care practice.

Patient behavior is improved as a result of the increased self-care and knowledge of patients. Improved skills should be considered when employing special methods that are appropriate for illiterate patients, such as videos and colored pictures, which are expected to lead to improved disease control. Better patient outcomes and less use of health care services (such as emergency room visits and hospitalizations) should lead to reduced expenditures in the long run **(Mohamed et al., 2022).** Health teaching is primarily a responsibility of nurses, who are responsible for providing patient support **(Qalawa & Moussa, 2019).**

Ostomy patients should be assisted in achieving optimal functions, which encompasses physical, psychosocial, sexual, and emotional health, through a comprehensive and organized approach to this teaching. The purpose of this is to mitigate complications, enhance patient confidence, and surmount the obstacles that arise during the formation of a stoma (**Heerschap & Duff, 2021).**

The aim of the Study was to:

Evaluate the effectiveness of self-care educational instruction on quality of life among colostomy patients.

Research hypothesis: It was anticipated that colostomy patients' quality of life who received self-care educational instructions would improve in comparison to the control group.

Subjects and Methods:

Study design:

Quasi-experimental research design was used in the study.

Study Setting:

This study was conducted at Oncology Hospital and surgery outpatients' clinic affiliated to the Ministry of High Education and Scientific Research Tanta University.

Subjects:

A Purposive sampling of 60 colostomy Patients was included, the sample was

divided randomly into two equal groups (control and study) each group consisted of (30) patients. The sample size was calculated based on a power analysis equation to ensure obtaining an adequate and representative size, where Total target population size=200 per year, Confidence level= 99.9%, Expected frequency =50%, Accepted error =5%,

Confidence coefficient=95%.

Tools:

Four tools were used for data collection.

Tool I: Colostomy Self-care Knowledge Questionnaire

The tool was developed by the researcher. This tool included three parts:

Part I: Patients' Socio-Demographic data: It encompassed the following: the name of the patient, their mobile number, their age, sex, marital status, educational level, occupation, financial income, and place of residence

Part II: Clinical Data about Colostomy Patient

It comprised data regarding patients' past medical history, including the diet regimen prior to colostomy surgery, their diet consumption prior to surgery, and the prior training about stoma care. Additionally, the patient's current medical history, including the weight, length, diagnosis, type of colostomy, stoma site, and duration of colostomy living.

Part III: Colostomy-related Knowledge of Self-care

This tool was developed by the researcher based on recent literatures **(Erazo & Carballo, 2023)**. This tool used to assess patient's knowledge about definition, indications, types, normal stoma characteristics, characteristics of skin around stoma, abnormal manifestations, and food allowed, food restricted, food causing odor, food that can thicken colostomy output, and colostomy irrigation definition, objectives, warning signs, colostomy content types and pouch information.

Scoring system: patients were asked to indicate their score of knowledge through true, false and MCQ questionnaire by using three points with fixed value ranging from zero to two, possible response per item: (0) Don't know or incorrect answer, (1) Correct and incomplete, (2) Correct and complete. Total score was converted to percentage.

Total Knowledge Score level was as following:

- Low knowledge (<60%)
- Moderate knowledge (60 %-75%)
- High knowledge (≥ 75%)

Tool II: Ostomy Self-Care Index Scale (OSCI): This tool was developed by (**Villa et al., 2019**). In order to evaluate self-care maintenance, monitoring, administration, and confidence, adapted by the researcher. It is a self-

reporting instrument with 32 items divided into four parts using a Likert scale with 1 being never, 2 being sometimes, and 3 being always. The self-care confidence subscale measures one's belief in one's own abilities to engage in effective self-care; it consists of 10 items, while the self-care maintenance subscale evaluates various facets of self-care (9 items), self-care monitoring (8 items), and self-care management (5 items).

Scoring system:

There are a total of 32 items on the scale, and each one comes with a score between 1 and 3. A total score of 96 is technically achievable, but a score of 32 is considered quite low. The standardized score for this scale is 0. Greater improvement in self-care is indicated by higher ratings.

Total score level was as following:

- Adequate (>75%).
- Inadequate (<75%).

Tool III: Observational Checklist for Colostomy Self-care Practices

This tool was developed by **(Potter, 2020)** and adapted by the researcher based on recent literatures **(DeWit et al., 2016; Hinkle & Cheever, 2018).**

It was implemented to evaluate patients' practices pertinent to their stoma self-care. This checklist featured five primary categories: the preparation of a colostomy base and bag (11 items), the removal of the old base and bag (5 steps), the assessment of the contents of the pouch (6 steps), the cleaning, disinfection, and evaluation of the stoma and the surrounding skin (5 steps), and the application of a new colostomy base and bag (8 items).

Scoring system of practice: Respondents were asked to indicate their score related to colostomy self-care practice through check list by using two points, possible response per item (0) not done (1) done.

Total score level was as following

- Satisfactory ≥75%.
- Unsatisfactory <75%.

Tool (IV): Stoma Quality of Life Index (SQOLI) Scale

This tool was used to assess the quality of life of colostomy patients. It was developed by **(Marquis, Marrel and Jambon, 2003)**. There are a total of 24 questions designed to measure quality of life. These questions were further divided into seven categories, each with 24 questions: mental health (5 questions), physical health (5 questions), self-perception (5 questions), pain (2 questions), sexual health (1 question), diet (3 questions), and social concerns (3 questions).

Scoring system:

Of the 24 items that comprised this scale, each was assigned a score between 0 and 5. Each question is answered on a 6-point Likert scale with end points of 0 or 5: 0 is never. 1-rarely, 2-somtimes, 3-often, 4-Frequently, 5-always. Scores ranging from 0 to 170 comprise the total score then converted to percentage.

Total score level as following:

-Better quality of life ≥70%.

-Worst quality of life <70%.

Ethical consideration:

Official letters were sent by the nursing faculty to the relevant authorities to study settings. Following a comprehensive explanation of the study's aims, all participants were asked to give an informed consent. There was no injury or harm experienced by the entire subject population as a result of the nature of the study.

The collected data was subject to confidentiality and privacy considerations.

Content Validity

Seven medical surgical nursing specialists and surgery professors assessed the produced tools for content validity to make sure they were clear and useful. Based on their findings, they made adjustments.

Pilot study:

In order to determine whether the tools were practical, relevant, and well-organized, and to find out what problems might develop when collecting data, pilot research was carried out on 10% of the study's participants in the mentioned setting.

Reliability:

Cronbach's Alpha test was implemented. The Cronbach's Alpha values for tool I, two, three, and four were 0.827, 0.810, 0.847, and 0.912, respectively.

Data collection:

The duration of data collection was 10 months starting from October 2023 to July 2024, after obtaining the permission to conduct the research from the required authorities.

Self-care educational instructions were conducted on three phases as follow:

A- Assessment Phase:

Prior to administering the self-care educational instructions, assessment for all subjects in the study, including both control and study group, using Tools I, II, and III to determine the patients' level of knowledge, practice, and quality of life, as well as their needs in relation to management behavior.

B- Planning phase:

The researcher distributed an Arabic-language compendium of self-care educational instructions to patients as a guide, having established them in English and translated into Arabic based on the results of the assessment phase and an extensive literature review. The educational instructions were introduced in an attractive colored booklet, group discussion and power point presentation.

Expected outcomes were including:

Improve colostomy patients' self-care knowledge. Improve patients ' knowledge about lifestyle modifications and quality of life with colostomy. Improve clinical outcomes for patients with temporary or permanent colostomy. Decrease

complications related to self-care practices.

C- Implementation phase:

Application of self-care educational instructions was implemented by the researcher in three basic sessions; each session was about 20 – 30 minutes.

Session I (Theoretical session): It was designed and developed by the researcher based on recent literature review to cover the following items (definition of colostomy, indications of colostomy, normal stoma characteristics, diet instructions including avoidance of food for both temporary and permanent stoma and abnormal manifestations to seek medical advice, complications related to colostomy using booklet and Power Point presentation.

Session II (Theoretical session):

In order to evaluate patients' comprehension of colostomy monitoring, maintenance, management, and self-care confidence, the researcher devised and implemented tool II (OSCI).

Session III (Practical): Educational instructions regarding colostomy self-care practices and quality of life:

It concerned with colostomy**,**

Taking care of oneself when preparing a colostomy base and bag, as well as during removing the previous one, assessment of the content of the ostomy pouch, cleaning and disinfection of the stoma, the assessment of the stoma and the surrounding skin, and the application of a new colostomy base and bag are addressed in Tool III and Tool IV to enhance the quality of life. The booklet is provided.

D- Evaluation phase:

Before the instructions were implemented, baseline data was collected from the patients under investigation using tool (I) parts 1&2.

Evaluation of patients' self-care practices and quality of life was conducted before and after the application of self-care educational instructions using Tool I part 3, Tool II, Tool III, and Tool IV.

Results:

Table (1): Clarifies Distribution of Studied Colostomy Patients' Sociodemographic Data:

reveals that both contol and study group 33.3% and 46.7% were at age between 50 to 60 years respectively with mean age 45.7 ± 11.3 and 47.6 ± 10.9. Regarding sex, more than half of cases in control and study group were females 53.3% and 56.7% respectively.Conerning marital status, more than half of the control and study groups 66.6% and 56.7% were married Related to educational level,more than one third were basic education 40% and 33.3% in control and study group respectively.

As for occupation, half of cases in control group were employed 50% and near to half in study group were house wifes 46.7%. In relaton to income

level, more than half of both control and study group did not have enough income 65.7% and 60% respectively.

Table (2): Illustrates Distribution of Total Self-Care Knowledge Level of Studied Colostomy Patient's. It illustrates that study group revealed a highly significant difference in self-care knowledge after self-care educational instructions (P = 0.000). As more than three quarter had high level of total self-care knowledge about colostomy after educational instructions compared to only 10% in control group.

Figure (1): Shows Total Score Level of Ostomy Self-Care Index among Colostomy Patients at Study and Control Groups Pre and Post Educational Instructions.

This figure presents that study group showed significant improvements in all aspects of self-care (maintenance, monitoring, management, and confidence) after receiving self-care educational instructions. The high χ^2 values and P=0.000** indicate these improvements are highly statistically significant.

Figure (2): Shows distribution of total studied colostomy patients related colostomy self-care practices level pre and post self-care educational instructions.

This figure presents that study group showed significant improvements in all aspects of colostomy self-care practices after receiving educational instructions. The P =.000 indicate these improvements. The present investigation identified a highly significant disparity between the control and study groups in terms of their overall colostomy self-care knowledge.

Table (3): Shows distribution of studied colostomy patients related to total score level of stoma quality of life pre and post educational instructions.

It was noticed that before educational instructions, the majority of studied patient have a worst level quality of life with no statistically significant difference (P >.05). There was a high statistical significant improvement in all aspects of stoma quality of life at study group (P =0.000).

Table (4): Illustrates Correlation between Studied Variables Pre- Post Educational Instructions.

This table indicates a significant positive association between total self-care knowledge, ostomy self-care index, practices, and total quality of life, post educational instructions (r.0.298, r.0.517, r.0.497).

Table (1): Distribution of Studied Colostomy Patients' Sociodemographic Data

Sociodemographic data	Control N=30		Study N=30		χ^2	P
	n	%	n	%		
Age:						
18 - <30	5	16.7	3	10		
30 - < 40	8	26.6	5	16.7		
40 - <50	7	23.3	8	26.6	**1.253**	**0.75**
50 – 60	10	33.3	14	46.7		
Mean ± SD	45.7 ± 11.3		47.6 ± 10.9			
Sex:						
Male	14	46.7	13	43.3	**0.812**	**0.904**
Female	16	53.3	17	56.7		
Marital status:						
Single	7	23.3	8	26.7	**0.662**	**1.021**
Married	20	66.6	17	56.7		
Divorced	2	6.7	3	10		
Widow	1	3.4	2	6.6		
Education level:						
Illiterate	5	16.7	5	16.7	**0.713**	**0.960**
Basic Education	12	40	10	33.3		
Secondary	8	26.6	8	26.6		
University	5	16.7	7	23.3		
Occupation:						
Employee	15	50	13	43.3	**1.472**	**0.062**
Housewife	13	43.3	14	46.7		
Retired	2	6.7	3	10		
Financial income:						
Enough	13	43.3	12	40	**0.883**	**0.871**
Not enough	17	56.7	18	60		
Residence:						
Urban	12	40	13	43.3	**1.900**	**0.057**
Rural	18	60	17	56.7		

Table (2): Distribution of Studied Colostomy Patient's related to Total Self-Care Knowledge

Total Self-care Knowledge		Control N=30		Study N=30		χ^2	P
		N	%	N	%		
Total Self-care Knowledge pre	High	3	10	3	10	**1.002**	**0.085**
	Moderate	6	20	5	16.7		
	Low	21	70	22	73.3		
Total Self-care Knowledge post	High	3	10	22	73.3	**19.367**	**0.000****
	Moderate	7	23.3	6	20		
	Low	20	66.7	2	6.7		

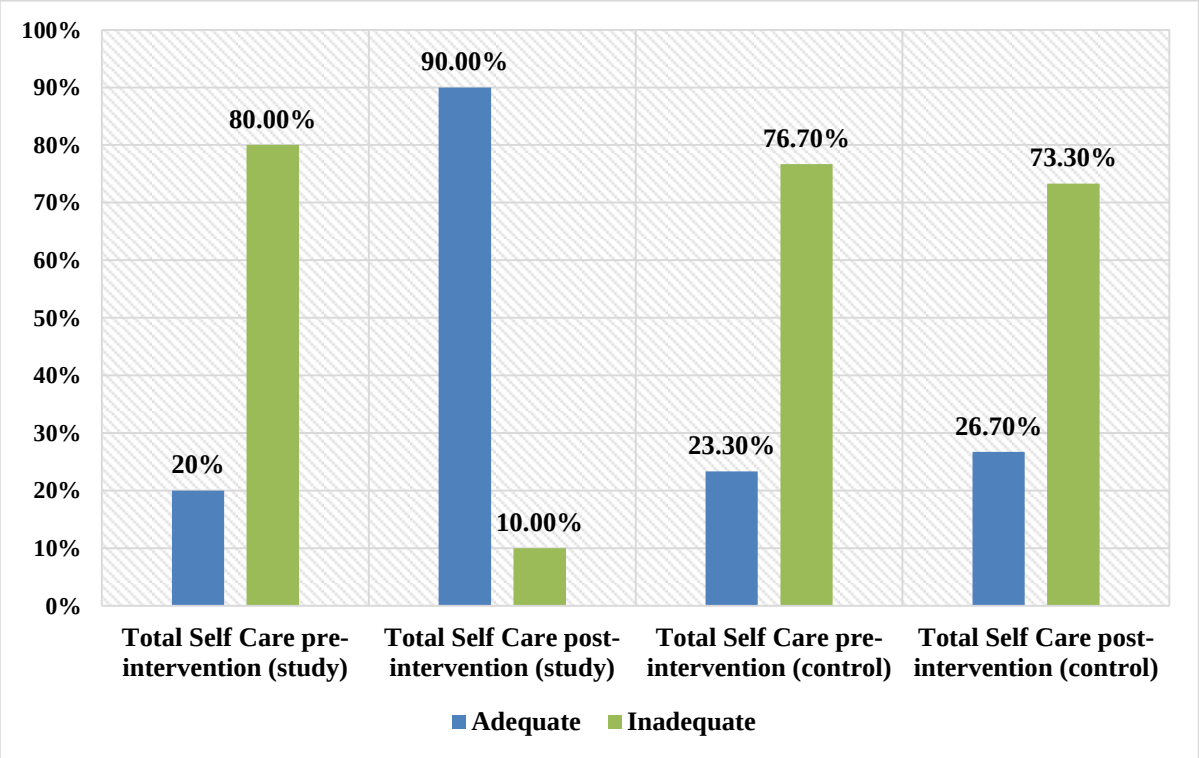

Figure (1): Total Score Level of Ostomy Self-Care Index among Study and Control Group Pre and Post Educational Instructions

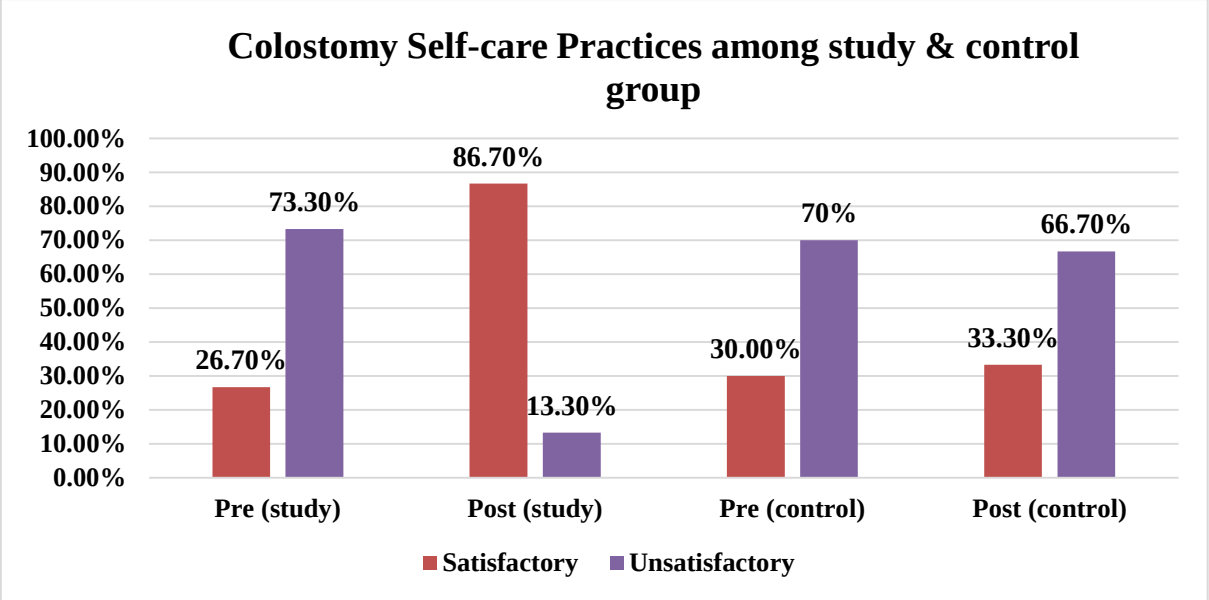

Figure (2): Total Colostomy Self-Care Practices Level among Studied Patients Pre and Post Educational Instructions

Table (3): Distribution of Studied Patients Related to Total score level of Stoma Quality of Life Pre-Post Educational Instructions

Total Score level of Stoma Quality of Life		Pre Educational Instructions						Post Educational Instructions					
		Control N=30		Study N=30		t. test	P	Control N=30		Study N=30		t. test	P
		n	%	n	%			n	%	n	%		
Psychological well-being	Better	3	10	4	13.3	**1.007**	**.189**	5	16.7	27	90	**18.432**	**.000****
	Worse	27	90	26	86.7			25	83.3	3	10		
Physical well-being	Better	7	23.3	7	23.3	**0.889**	**0.664**	6	20	28	93.3	**17.102**	**.000****
	Worse	23	76.7	23	76.7			24	80	2	6.7		
Body image	Better	6	20	5	16.7	**0.918**	**1.002**	5	16.7	29	96.7	**16.324**	**.000****
	Worse	24	80	25	83.3			25	83.3	1	3.3		
Pain	Better	9	30	8	26.7	**0.882**	**0.763**	8	26.7	26	86.7	**20.118**	**.000****
	Worse	21	70	22	73.3			22	73.3	4	13.3		
Sexual activity	Better	5	16.7	4	13.3	**0.671**	**0.482**	5	16.7	19	63.3	**18.351**	**.000****
	Worse	25	83.3	26	86.7			25	83.3	11	36.7		
Nutrition	Better	5	16.7	6	20	**0.918**	**.182**	6	20	26	86.7		
	Worse	25	83.3	24	80			24	80	4	13.3	**15.229**	**.000****
Social concerns	Better	4	13.3	3	10	**0.664**	**.512**	7	23.3	24	80		
	Worse	26	86.7	27	90			23	76.7	6	20	**16.112**	**.000****
Total	Better	7	23.3	5	16.7	**0.915**	**.488**	9	30	24	80		
	Worse	23	76.7	25	83.3			21	70	6	20	**24.572**	**.000****

Table (4): Correlation between Studied Patients Pre- Post Educational Instructions

Variables	Pre Educational Instructions				Post Educational Instructions			
	Total Knowledge of Self care	Ostomy Self-Care Index	Colostomy Self-care Practices	Total quality of life	Total Knowledge of Self care	Ostomy Self-Care Index	Colostomy Self-care Practices	Total quality of life
Total Knowledge								
Ostomy Self-Care Index	r. 0.287 p. <0.05*				r. 0.356 p. <0.05*			
Colostomy Self-care Practices	r. 0.471 p. <0.01**	r. 0.581 p.<0.01**			r. 0.568 p. <0.01**	r. 0.602 p. 0.01**		
Total quality life	r. 0.260 p. <0.05*	r. 0.486 p.<0.01**	r. 0.390 p. <0.01**		r. 0.298 p. <0.05*	r. 0.517 p.<0.01**	r. 0.497 p. <0.01**	

Discussion

Colostomy patients frequently encounter significant psychological, physical, and social obstacles that impair their quality of life. Managing a stoma requires knowledge and skills that are often unfamiliar to patients' post-surgery, leading to feelings of helplessness and reduced self-confidence. The effective educational interventions can bridge this gap, empowering patients with the tools they need to perform self-care and adapt to their new lifestyle **(Xiao et al., 2023).**

In the present study Socio-demographic Characteristics, the study's age distribution revealed that 45.7 ± 11.3 years old for the control group and 47.6 ± 10.9 years old for the study group, with almost a third and half of the participants in each age within 50 to 60-year-old, respectively.

This may be due to that elderly patients are more vulnerable than younger patients due to several age-related chronic diseases, unhealthy life style such as smoking, fatty spicy food, and consumption of caffeine and overuse of

medications so are risk for colon cancer **(Kawazoe et al., 2023).**

This finding was supported by **Mohamed et al., 2017** who discovered that the majority of the patients under investigation were between the ages of 50 and 60, with a mean age of 47.6 ± 10.9 years. According to The sociodemographic data showed a similar distribution in terms of age with a majority of patients being middle-aged and were married. While current study contradicts with the study in other aspect, it found a higher percentage was male patients (63.3%) compared to the present study, which 56.7% were females. This contradiction may be related to bad dietary habits and stressful conditions that affects colon.

In relation to educational level, One-third of the participants in the study were basic education, and over half of the patients were living in rural areas. **Regarding monthly income,** Two-thirds of the study patients considered that their income was inadequate to meet their daily needs. These results are agreeing with **(Habiba et al., 2021)**. That was in relation with skin complications due to bad self-care as high costs of colostomy base and pouch.

Concerning total colostomy self-care related knowledge, according to this study's findings, when self-care training instructions were put into place, most patients had a satisfactory level of knowledge, which was higher than before. This could be attributed to the comprehensive and holistic care that was provided to individuals who had stoma surgery, which indicated that they found it vital to participate in educational and informational meetings and courses.

They possessed satisfactory knowledge about the disease.

There was a highly significant variance in the sample's total knowledge score before and after receiving self-care training instructions. In perfect harmony with the preceding discoveries, this observation. **Nurleli et al., 2021,** the results of this study indicated that the structured education instructions incorporated into the study was highly effective in enhancing the knowledge and attitude score of patients regarding colostomy care.

Concerning to total ostomy self-care index practices (OSCI), the current investigation found a highly significant difference between the pre and post self-care instructional instructions scores on the ostomy self-care index (P.000). Consistent with these findings were **Giordano et al., 2020**, according to whom, patients generally maintained and monitored their own health-care. In contrast, these findings were in disagreement with **Giordano et al., 2020** who brought out the fact that some behaviors related to self-care confidence and self-care management were lacking.

Regarding total practice scores level, the present study's results demonstrated a highly significant development in all practice aspects between the pre- and post-application of self-care educational instructions. Pre-application of self-care educational instructions, over half of the patients in the current study had an insufficient practice score level. Nevertheless, following the implementation of these guidelines, more than two-thirds of the patients achieved a satisfactory level of practice. This finding lines up with what we found when we looked into it by **AbdElhamed et al., 2024**, Patient knowledge and practice regarding colostomy care related to colorectal cancer were significantly improved through peer-led education, as shown by a statistically significant difference in all areas of practice before and after the structured educational program was implemented. In addition, the ostomy practice of participants increased due to the educational and training opportunities provided, as supported by **Wang et al., 2021,** their practice was improved as a result of their training and education.

As regards colostomy related quality of life, the control and study groups did not exhibit any statistically significant differences in terms of demographics, self-care knowledge and practices, or quality of life prior to the implementation of the self-care teaching instructions in the current study. These discoveries are consistent with **Zewude et al., 2021.**

Significant enhancements in ostomy self-care knowledge and practicing abilities capacity were observed in the study group subsequent to the intervention's implementation prior to hospital discharge. Based on these findings, it seems that the researcher thought that colostomy patients' self-care skills and quality of life were improved by education and participation in self-care educational instructions.

Regarding the correlation between total score of knowledge and self-care practices, according to the current investigation, there was a robust positive correlation between total knowledge and total self-care practices following the implementation of the post-colostomy self-care training instructions. Consistent with this conclusion, **Tobeek et al., 2016**, whose behalf the claim that knowledge and practice were positively correlated was made. This means that the ability to carry out routine tasks becomes more refined as one's knowledge base grows. In addition, this investigation was consistent with **Mohamed et al., 2017** who reported a positive correlation between self-care practices and knowledge following the implementation of an educational program.

Likewise, patients with colostomies who were evaluated, there is a strong

association between their knowledge scores and their practice after the educational implementation stages compared to before the study. This finding aligns with **Qalawa & Moussa, 2019.**

Conclusion:

It can be concluded that educational instructions have a positive impact on the correlations between self-care knowledge, practices, and quality of life, with most correlations becoming stronger and more significant post-education.

Recommendations:

Based on the findings of the current study, the following recommendations are suggested:

Recommendation for patients:

-Consultations and phone calls allow patients with colostomies to receive individualized guidance and instructions that focuses on their specific needs in order to address and overcome any obstacles they may have.

-Develop instructional special units in surgical departments, particularly in colon surgeries, with experienced enterostomal nurse and all essential Resources, such as technical manuals and multimedia.

- Setting up a registration system for patients with ostomy.

Recommendation for further research:

-Development of a self-care educational instructions based on needs for patients with ostomy.

-Further studies are needed to explore the long-term effects of self-care education on the quality of life among colostomy patients. Additionally, research should investigate the specific components of the educational programs that are most effective, as well as the role of technology in delivering these interventions.

-Replication of the study with larger sample in different settings is required for generalization of the results.

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