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Effectiveness of structured educational program on patient's knowledge and practice regarding colostomy care in West-Bank

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Thesis Approval

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Declaration

I certify that the master's thesis I have submitted is the product of my study and that neither it nor any of its components have ever been submitted for consideration for a higher degree at any other institution or organization.

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Abstract

Introduction

Colostomy is an artificial colon opening created to replace the natural intestinal passage. The list of indications includes inflammatory diseases, malignancy, fistulas, congenital abnormalities, trauma, strictures, ischemia, and thrombosis. Patients with colostomy experience a lot of stressors raised from changes in their body image and from ability to care colostomy and perform their daily living practice with stoma presence. So, the implementation educational program by nurses helps those patients to care their colostomy appropriately.

Objective

Assessing the effectiveness of the structured educational program on patient's knowledge and practice regarding colostomy care in West Bank.

Methods

A quasi-experimental study design (pre–post-test) was used to achieve the objectives of this study. 37 adult male and female colostomy patients made up the nonprobability convenient sample for this study, which conducted in the outpatient surgical, medical, and oncology clinics in both governmental and private hospitals in West Bank. A questionnaire was used to assess their knowledge and practice regarding colostomy care.

Results

This study results revealed that colostomy patients before the implementation of the structured educational program, had lack of knowledge and lack of the correct practices to care their stoma. A statistically significant difference was found between the total

knowledge and total practice scores of the participants post implementation of the structured education program.

Conclusions

The current study findings suggested that structured patient education is a useful tool for improving patient's understanding of and adherence to colostomy care practices.

Keywords: Structured education, Colostomy, Practice, Knowledge.

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List of Abbreviations

CRC	Colorectal cancer
RCT	Randomized control trial
ENT	Ear nose and throat
PhD	Doctor of Philosophy
et al.	And others
SPSS	Statistical package for the social science
F	Frequency
%	Percentage
N	Number

Chapter One

Introduction

1.1 Background

Colon cancer is one of the most common cancer cases around the world, an 8% of cancer deaths annually are related to colorectal cancer (CRC) (Jemal et al., 2011). It is considered one of the most commonly diagnosed cancers among females and the third diagnosed cancer within the male population (Jemal et al., 2011).

In developed countries, colorectal cancer is considered a major health problem (Bishehsari, 2014). On the other hand, developing countries witness an increase in colorectal cancer burden due to many factors, one of these factors is the adapted Western lifestyle (Bishehsari, 2014). Colorectal cancer incidence rates increased for both males and females significantly as showed in Center et al. (2009) study. This increase occurs in different regions worldwide. In the Middle East, the incidence rate of colorectal cancer increased especially in areas located on the coast of the Mediterranean Sea (Ali Hussein, Alhurry et al., 2017). As the largest proportion of this area's population is young, one-fifth of colorectal cancer patients are less than 40 years old (Malekzadeh et al., 2009). The number of lesions on the right colon increases with the decrease in patient's age as a study showed in Saudi Arabia, Iran, and Arab Palestinians (Rozen et al., 2006; Pelsamany et al., 2014).

In the last two decades, the incidence of colorectal cancer among Palestinian women increased by 208% (Qumseya et al., 2014). Lung cancer is the most common cancer among Palestinian men, followed by prostate cancer and colorectal cancer. For Palestinian women breast cancer is the most common cancer followed by colorectal cancer (Abu-Rmeileh et al., 2016). According to the annual report of the Ministry of Health in Palestine, colorectal cancer become the second most common cancer in 2022, as mentioned in the ministry annual report also there are 440 new cases in West Bank and 220 new cases in Gaza, its incidence among

males is 16.9 per 100 000 and among females 13.6 per 100 000 in West-Bank (Ministry of Health, 2022).

Colorectal cancer treatment mainly includes relieving symptoms and limiting or stopping the progression of the disease which may require bowel resection, ostomy creation and chemotherapy or radiotherapy use (Taylor & Morgan, 2011). The rate of stoma surgery increases with the increase in colorectal cancer incidence. The number of this increase is 100,000 per year and the number of existing permanent colostomies is more than one million cases (Pandey et al., 2015). There is a wide variation in the use of colostomy in colorectal cancer, colostomies vary from 6% to 47% and from 5% to 69% of ileostomies (Herrle et al., 2016).

Colostomy defines as a procedure performed to make an artificial opening in the colon as the normal bowel passing through the anus is interrupted (Januário De Sousa et al., 2016). The most common indications for colostomy construction include: colon cancer, ulcerative colitis and diverticulitis (Engida et al., 2016).

Colostomies can be divided into four primary categories according to how they were made: double barrel, loop, Hartman's, and spectacle. The type of colostomy chosen is determined by specific indications that includes: the overall health of the patient, the surgeon's experience, and the time of operation. Loop colostomies and Hartman's end colostomies are often constructed (Marin, A. W., et al., 2005; Bekele, A., et al., 2009).

The presence of colostomy can be temporary until the distal part of the colon heals and then the two parts of the colon reconnect, reconnection can occur after weeks, months, and even years but it can be permanent also (Abdelmohsen, 2020). A stoma formation brings huge changes on patient's function and their body image perception (Samarasekera & Jayarajah, 2017). Those changes affect physical and psychological aspects (Notter & Chalmers, 2012), peristomal skin problems, leakage, and the need for adaptation to stoma

presence consider the most common physical challenges stoma patients face (Shaffy et al., 2012). A lot of studies also demonstrated that depression and anxiety are considered the most common emotions patients undergo colostomy experience (Jin et al., 2019), especially anxiety regarding stoma issues such as privacy when emptying the pouch, gases, skin irritations and leakage (Liao & Qin, 2014). In addition to emotional effects, patients with a stoma can experience complications, within the first thirty days of the stoma's formation, ischemia/necrosis, retraction, mucocutaneous separation, and parastomal abscess are among the early complications that might arise. Parastomal hernia, prolapse, retraction, and varices are examples of late complications (Krishnamurty et al., 2017).

All of these findings and changes affect patient's lives and indicate the importance of nurse's role as an educator to help the patients in caring for their stoma independently through structured education and instructions that may help them to expand their knowledge (Abd El-Rahman et al., 2020). A common definition of adult learning is a long-term behavioral change or the acquisition of knowledge via study (Galbraith & Fouch, 2007). The learner's motivation should be taken into consideration in adult education programs, strengthening the information and abilities being acquired, holding onto important lessons, and providing lessons to novel contexts all these points are considered a method of adult education (Javadi, N., & Zandieh, M. 2011).

Patient education is defined as a process of empowering people to make knowledgeable decisions regarding their health-related behaviors, by supporting healthy lifestyles and encouraging adherence to medical treatment plans (Bellamy, 2004). Patient education aims to give knowledge that promotes healthier lifestyle choices when patients and their families leave the hospital, as well as to help patients and their families become more adept at providing self-care and taking charge of their health care (Muma, 2007). When patients receive effective patient education, their sense of empowerment, self-efficacy, and

self-knowledge all improve (Sanchez & Cooknell, 2017). An effective patient education is achieved by applying the aspects of adult learning theory which include: respect and understanding each patient's uniqueness and capacity for learning (Sanchez & Cooknell, 2017).

According to Richard & Shea (2011) the act of taking care of oneself is referred to as self-care, and the capacity to engage in these activities is referred to as self-care ability. The belief by patients that they can successfully manage their stoma to minimize negative effects is known as stoma care self-efficacy. According to Neuman et al., (2010), ostomy adjustment practices positively correlated with stoma care self-efficacy.

The results of previously conducted studies also showed that an increase in patient's knowledge makes them able to appropriately care for their stomas which will increase their ability to perform their daily living activities (Mohamed et al., 2017; Safwat et al., 2018). Another study reported that individuals with higher levels of stoma care knowledge and those who can manage all parts of care independently in comparison to patients with less knowledge and more reliance on others for their stoma care were better psychosocially adjusted and had higher levels of self-esteem to their stomas (El Sayed, Elhameed & Hassanen, 2018).

1.2 Problem Statement

The number of colon cancer cases in Palestine increased as mentioned in the Ministry of Health annual report it came in the second-place post breast cancer (Ministry of Health, 2022), and the second cause of death related to cancer in West-Bank as it forms 13.9% (Elshami et al., 2022). So, as a result of this the number of patients with colostomy increased. The presence of colostomy is considered a huge life changing event (Stavropoulou et al., 2021), as clinical observation reflects a deficiency in patient's knowledge and lack of correct practices regarding colostomy care within patients in West Bank. As the development of an

abdominal stoma is a significant life alteration that gives rise to intricate physical, emotional, social, and psychological issues (Persson et al., 2010). Also, patients with colostomy struggle to function in social and professional settings, and they also struggle with issues related to their body image and sexuality (Liao C et al., 2014). In addition, patient with colostomy experience anxiety related to problems they may face during colostomy care such as: Leakage, peristomal skin irritation and gases (Liao C et al., 2014). In order to support colostomy patients, nurses as educators should concentrate on providing the needed information that will help them in caring their colostomy (Shende M et al., 2007). Patient education before and after surgery can help patients in acceptance of colostomy presence, experience fewer problems, and live better (Savard J et al., 2009). So, a well-structured education including a lecture about stoma care and training to care for colostomy appropriately will empower patient's knowledge and practice regarding colostomy care.

1.3 Significance of Study

The Significance of this study comes from the increase of colorectal cancer incidence in Palestine as mentioned in the Ministry of Health annual report in 2022 (Ministry of Health, 2022), and from those complications that affect the patients with colostomy, especially post-operatively which make changes on their lives (Ose et al., 2017), those complications like stoma hernia incidence of occurrence range from 12% to 40%, retraction incidence 10% to 24% (Salvadalena, 2008). In addition to stressors patients experience related to pouch leakage (62%), offensive odor (59%), skin irritation (76%), depression/anxiety (53%) and reduce pleasure activities (54%) (Ran et al., 2016). These complications raise the need for patient education by nurses. According to a recent research, stoma-therapy nurses have a major role in the treatment and prevention of mental, physical, and social issues affect patients post (Fernandes Sousa & Brito Santos, 2020). So, the major role for nurses here is to educate them how to care their stoma in a right way through a comprehensive and organized manner so the

patients can maintain the optimal function in all aspects of their life (Abdulmutalib et al., 2018). Providing patients with education and support throughout the postoperative phase is a crucial nursing intervention that aids in fostering patient acceptance of the stoma and motivates them to participate in their stoma care (Lo et al., 2010).

This education plays a significant role in reducing hospital stay periods, reducing the number of hospital readmissions, and reducing the occurrence of complications post-operation (Abdelmohsen, 2020). Pre and post-operative education and patient counseling are considered a crucial component of an improved recovery program, as it is important to reaching an early discharge from hospitals (Forsmo et al., 2016; Halaszynski et al., 2004). Another study found that the application of organized instructional guidelines improves patient performance, knowledge, and self-efficacy in their colostomy care (El-Sayead Shrief & Mokhtar Mokhtar, 2019). The vital goal of patient education programs is to modify patient's behavior over time by providing them with information that will enable them to make decisions on their own, assume maximum responsibility for their treatment, and enhance their treatment plan results (Wingard R, 2005). In addition, this study is considered crucial as it is the first study conducted in West Bank to assess patient's knowledge and practice regarding colostomy care and provide an educational program to them consisting of educational session for 40 minutes including information about colostomy and practice on colostomy care training and booklet about colostomy care.

1.4 Purpose of the Study

The purpose of this study is to assess the effectiveness of structured education on patient's knowledge and practice related to colostomy care.

1.5 Specific Objective of the Study

1. Evaluate patients with colostomy baseline knowledge and practice about colostomy care.

2. Assess colostomy patient's knowledge and practice regarding colostomy care after the implementation of the structured educational program.
3. Assess patients with colostomy acquisition of knowledge and practice post structured education about colostomy care in relation with their demographic characteristics (Age, Gender, level of education, length of hospital stay).

1.6 Study Hypothesis

1. There is a statistically significant difference at level ($P \leq 0.05$) between patient knowledge about colostomy care before and after the structured education application.
2. There is a statistically significant difference at level ($P \leq 0.05$) between the patient's ability to practice colostomy correctly and safely before and after the structured education application.
3. There is a statistically significant difference at level ($P \leq 0.05$) between males and females in knowledge and practice acquisition post-structured education application.
4. There is a statistically significant difference at level ($P \leq 0.05$) between different educational levels in knowledge and practice acquisition post-structured education application.
5. There is a statistically significant difference at level ($P \leq 0.05$) between age and acquisition of knowledge and practice post-structured education application.
6. There is a statistically significant difference at level ($P \leq 0.05$) between knowledge and practice acquisition and the length of hospital stay post operation post education.
7. There is a statistically significant difference at level ($P \leq 0.05$) between receiving ordinary verbal instruction before surgical intervention and the acquisition of knowledge and practice post-education.
8. There is a correlation between knowledge and practice after the application of structured education.

Chapter Two

Literature Review

2.1Introduction

In this chapter, a literature review is presented related to the study topic. The literature discusses colostomy definition and indications, patient life changes post colostomy formation, nurse's role, and the effectiveness of education on patient knowledge and practice regarding colostomy care.

2.2Search Process

Google Scholar, PubMed, and CINAHIL were all searched. The query entered to the search was: impact and effectiveness of structured education on patient's knowledge and practice related to colostomy care and (OR, AND) was the Boolean operator used in the search process. The free full text was offered, and the language is English.

When fecal excretion cannot occur through the anal canal due to anatomical limitations, a surgical intervention known as a colon ostomy is performed. In this surgical procedure, an incision for the colon is made and then colon exteriorization is performed through the abdominal wall (Campos et al., 2017), This artificial opening in the abdominal wall called a stoma (Mohamed et al., 2017). The word stoma, a Greek term, means "opening" or "mouth", There are many pathological indications for colostomy formation. The most common cause is colorectal cancer, which forms 45.8% of cases, other indications for colostomy formation include: bowel obstruction, diverticular disease, functional bowel disease, abdominal trauma, non-traumatic bowel perforation, polyposis, and inflammatory bowel disease (Melotti et al., 2013). Depending on the cause of colostomy formation, its presence can be permanent or temporary (Salomé & de Almeida, 2014).

2.3 Effect of Colostomies on Patient's Life

The reviewed studies showed that colostomy formation has a negative impact on patient's lives (Brown & Randle, 2005). Colostomy presence forms not only a physiological burden on patients, as they experience a change in their defecation pattern and are unable to control it (Lim et al., 2015). It is also affecting their self-image, sense of independence, sexual life, working life, and social life (Çulha et al., 2016). Even though the main goal of stoma creation is to reduce patient's pain and suffering, it is also considered a source of distress for the patients. This stress arises from: pouch leakage, skin irritation, offensive odor, depression, anxiety, and limitations on activities (Dabirian et al., 2010). Studies also showed that concerns about uncertainty, anxiety, constraints in one's personal, professional, and social life, as well as a propensity for loneliness, can cause a person to become completely socially isolated (Stavropoulou et al., 2021). In addition, colostomy has multiple complications, which reported to occur most often during the first five years after surgery (Shabbir & Britton, 2010). Those complications are divided into short-terms that appear immediately post-operation: Stoma necrosis, high output led to fluid and electrolyte imbalances, and skin irritations. Late complications include: stoma stenosis, peristomal hernia, and stoma prolapse (Shabbir & Britton, 2010).

All of these stressors affect the quality of life of patients with stomas (Zewude et al., 2021). Quality of life is an overall well-being of an individual or community in terms of health and happiness, rather than financial prosperity (Post, 2014). A study found that ostomy surgery is associated with notable physical changes that may have an impact on patients' quality of life (Alenezi et al., 2021).

2.4 Patient's Education

One of the interventions we can focus on to help those patients to cope with and live with a stoma is patient education, which is defined as complete care for a patient with a chronic illness that might help them preserve or increase their quality of life (Zhou Ning,

Sunny Z & Chen Monica C, 2019). Many qualitative studies found that improving the quality of information provided to patients who will have a stoma in the pre-operation phase will improve their quality of life and decrease stoma complications (Sung et al., 2010). The provision of proper education and assistance by a specialized ostomy nurse has been crucial in obtaining improved outcomes (Burch, 2013).

Two randomized control trials (RCT) were reviewed about the effect of multimedia education on stoma patients, and the results revealed that the interventional group showed improvement in self-care knowledge, self-attitudes, and behaviors (Lo et al., 2010, Lo et al., 2009). Another RCT showed cost-effectiveness in patients who received an educational program compared with the control group (Lo et al., 2010). A systematic review study demonstrated that the period of hospital stay was low in patients with stoma who received education in comparison with those who received usual care (Faury et al., 2017). Even with this positive impact of education on patients with stoma, there is a lack of quantitative studies in our region that assess the effectiveness of education on patients with stoma knowledge and practice. This lack of knowledge is reflected on patients as they feel unprepared in the first post-operation weeks (Lim et al., 2015). Lack of time to obtain stoma care instructions has an impact on patient's ability to self-manage (Krouse et al., 2016). The results of a study conducted in Egypt reported that lack of knowledge and practice regarding colostomy care leads to a negative impact on patient's psychological aspect and self-esteem. On the other hand, the presence of a care training program has a positive impact on patient's knowledge and practice (El Sayed, Elhameed, & Hassanen, 2017). So, patient's education plays a significant role in patient adaptation to disease and their independence (Çulha et al., 2016b).

2.5 Booklet as an Educational Tool

A booklet is defined as a type of printed health education material. It has a textual content that is enhanced with images and color to help the patients understand a specific health topic. Patient's concordance will result from this awareness of certain facts, which will influence the way they behave (Karunia et al., 2019).

The instructive educational booklet was found that it is significantly improve colostomy patient's knowledge, attitudes, and coping skills, as well as reduce the problems they face (Andrews & Sharma, 2018). An interventional study finding showed that patients in the interventional group who received face-to-face training with sessions to answer their questions in addition to a home guide booklet their level of anxiety decreased, and their quality of life improved in comparison with colostomy patients in the control group (Khalilzadeh Ganjalikhani et al., 2019).

2.6 Nurse's Role

Nurses play a significant role in both pre-and post-operation phases, patient's health and quality of life are greatly impacted by patient education, which is a crucial component of routine nursing care and an essential nursing standard practice (Azzizadeh, 2013), so nurses serve as educators during both phases by outlining the requirements, the postoperative change in look and lifestyle modification (Burch, 2017). According to Chrobak (2009) study, nurse educator's role is to enable patients maintaining excellent health, learn about stomas, and be able to handle stoma complications. Another study concluded that improving stoma patient's social and personal life need a nurse who provides the patient with an appropriate practical-oriented education (Shanmugam1, 2016). According to a study carried out in Egypt, there was poor knowledge about colostomy care (El Sayed, Elhameed, & Hassanen, 2017).

In a study conducted by (Scharlach et al., 2014), about 90% of respondents were unaware of the correct handling procedures for pouches removal during colostomy care. According to a study done in Ethiopia, 73% of patients did not have the correct knowledge or techniques for

applying new pouches during colostomy care. In this study, just 7% of patients had these skills (Geleta, 2017). According to Lim et al., (2015) article, only 30% of patients were aware of how to empty and clean colostomy pouches, and 70% of patients were unaware of the right practical way of colostomy care. A finding of a study conducted in Egypt 6.7% of patients were performing it only in an acceptable way and 93.3% of respondents were performing pouch preparation inappropriately (Neelam et al., 2020). In the study conducted by Stoker (2016), 2% were totally blank according to stoma care, 4 % had fair knowledge and 94% of participants were completely knowing nothing about colostomy care.

2.7 Conceptual framework

Figure 1, provides a description of the conceptual framework, which provides a clear scientific map for research steps including input, intervention that was conducted during the research process, and the results of this intervention.

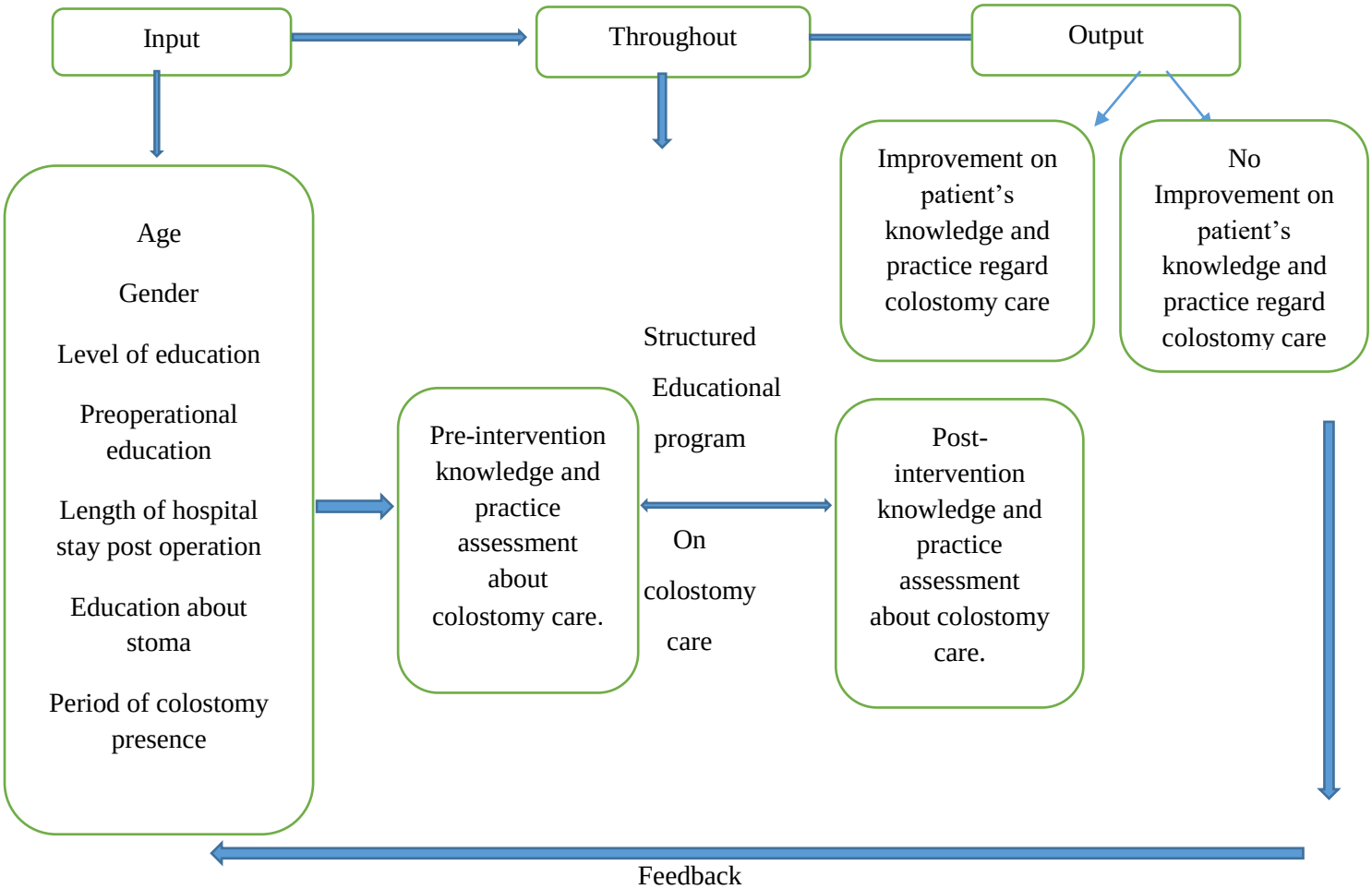

Figure 2.1: Conceptual framework

2.8 Conceptual definitions

Colostomy

It is a surgical technique used to redirect intestinal pathway in cases when the anal canal is not physically suitable for fecal excretion, a surgical incision in the colon wall and posteriorly exteriorizing it in the abdominal wall to facilitate the expulsion of gasses and waste products (De Campos et al., 2017). An incision known as a stoma is created by stitching the colon's margins to the abdominal skin wall's (Johns Hopkins Medicine, based in Baltimore, Maryland, 2023).

Knowledge

Awareness or acquaintance with a situation or truth acquired from experience (Neelam et al., 2020). Knowledge definition: understanding of or information about a subject that you get by experience or study, either known by one person or by people generally (Cambridge English Dictionary: Meanings & definitions 2020).

Practice

The practical application of a concept, theory, or approach as opposed to its theoretical underpinnings (Neelam et al., 2020). It's also defined as a term used to describe what really happens as opposed to what you think will happen in a particular situation (Cambridge English dictionary: Meanings & definitions 2020).

Patient Education

In order to prevent disease, promote health and provide treatment and care, nurses engage with patients in order to build mutually trusted relationships. This process is known as patient education (Che et al., 2016). A term is typically limited to the actions directed by the physician and/or support health staff to engage patients in the diagnosis, treatment, and prevention of disease (Hyner, 1978).

Self – care

The attitude of actively guarding one's own pleasure and well-being, especially in a stressful situation (Neelam et al., 2020). The act of taking care of yourself in order to prevent illness or to heal from it (Cambridge English Dictionary: Meanings & definitions 2020).

2.9 Operational Definitions

Knowledge

In this study, patient's correct and accurate information about ostomy care considered their knowledge (Neelam et al., 2020). This knowledge was tested by using a simplified Arabic questionnaire, then an educational program was provided to improve their knowledge. Then it tested post the educational program by using the same questionnaire.

Practice

Practice the right procedures and steps of care for colostomy opening (Neelam et al., 2020). Patient's practice was assessed by using a simplified Arabic questionnaire, they have been provided with the correct steps to care for colostomy through a practice session which is considered a part of the educational program.

Self-care

For the purposes of this study, self-care is the patient's own maintenance and preservation of the ostomy opening (Neelam et al., 2020). Patient's ability to care themselves was reflected on keeping their stoma healthy and functioning well by applying the correct steps and knowledge they learned during the educational program in this study.

Patient Education

In this study a structured educational program provides information about colostomy care to the patients. It is also provided training for patients on colostomy trainer manikin in order to promote their health.

2.10 Theoretical Framework

This thesis framework is based on Ludwig Von Bertalanffy's General system theory, which includes the following processes: input, throughput, output, and feedback. Program development, implementation, and evaluation are all covered under general system theory (Pihal, A et al, 2022). This theory defines input as the many kinds of data that enter through the system's limits and into the system from the outside world (Pihal, A et al, 2022). Demographic information and structured questionnaires for evaluation of patient's knowledge and practice about colostomy care are among the inputs used in this study. Throughout considering the phase of intervention implementation, in this thesis structured educational program is the intervention. Output reflects the results of interventions. Individuals use the feedback information from the environmental reactions to the system

output to modify and alter their interactions with the environment in an adaptive manner (Pihal, A et al, 2022).

One of the nursing theories raised and influenced by the open-system theory is the Neuman Systems Model (Alligood, 2014), The person is seen as a client or client system in the Neuman systems paradigm, consisting of intrinsic characteristics contained in a particular structure, so to make a better nursing decision the understanding of the interaction between the client system and the environment needed (Hannoodee, S et al, 2023).

All of the mentioned studies demonstrated that colostomy presence consider a life changing event that brings psychological and physiological changes on patient's life (Rosito et al., 2002), to help patients to care colostomy appropriately, an education by specialized colostomy nurse needed, so conducting a structured educational program helps the patients to have a sufficient knowledge to care their colostomy in appropriate way and improve their quality of life (Danielsen & Rosenberg, 2014). Also based on the reviewed literatures the implantation of the structured education reduces the risk of post operation complications and length of hospital stay post operation (Danielsen et al., 2013).

Chapter Three

Methodology

This chapter demonstrates in detail the study design, sampling method, and selection criteria, data collection tool, and ethical considerations in addition to data analysis.

3.1 Study Design

A Quasi-experimental (pre and post-test) design.

3.2 Setting

Colostomy formation procedures are carried out in the hospitals included in the study, in outpatient clinics for surgery, medicine and oncology in both governmental and private hospitals in West Bank.

1. Palestine Medical Complex: It is the biggest government hospital in Palestine established in 1963, located in Ramallah. It has 214 beds overall spread throughout five buildings. There is a resident training program at the hospital. It is considered also an educational hospital as numerous universities have provided their students with courses in nursing, nutrition, pharmacy, and physiotherapy to train on it. The hospital employs about 765 people. This hospital includes oncology, general surgery, critical care units, outpatient clinics, cardiac surgery, internal medicine, operation theaters, postnatal and labor, orthopedics, neurosurgery, cardiology, urology, vascular surgery, ear, nose and throat (ENT), emergency, neonatology, pediatrics, and endocrinology departments.
2. Istishari Arab Hospital: Consider a large private hospital in West Bank, this hospital was established in 2015, located in Ramallah. It includes 169 beds. More than 10 specialties have residency training programs at the hospital. In 2020, the hospital received Joint Commission International Accreditation (JCIA). The hospital employs about 550 people. Oncology, general surgery, outpatient clinics, internal medicine, gynecology, labor, orthopedics, neurosurgery, cardiac surgery, cardiology, internal medicine, urology,

vascular surgery, intensive care units, ENT, emergency services, pediatrics, neonatology, and endocrinology are just a few of the multispecialty services offered by the hospital.

3. Princes Alia Hospital: It is a governmental hospital, established in 1957, located in Hebron. It includes 237 beds, and 596 employees are working in this hospital. An educational hospital provides training in different medical fields. This hospital includes a lot of specialized departments: The operation department, surgery department, internal medicine department, pediatric and neonate departments, specialized out-patient clinics, cardiac care unit, medium cardiac care unit, intensive care unit, gynecology, labor department, cardiac catheterization department, and emergency department.
4. Al-Ahli Hospital: It is a non-profit charitable hospital، established in 1988, and is located in Hebron. It includes 304 beds, and the total number of employees in this hospital is 880. It is also considered an educational hospital that provides training to medical and nursing students. In addition, Al-Ahli Hospital is affiliated with its nursing college. It includes a surgical department, operation theaters, medical department, gynecology, neonate and pediatric department, outpatient's clinics, intensive care unit department, emergency department, gastroenterology and endoscopy department, labor department, cardiac catheterization lab, and nuclear medicine department.
5. Rafidia Governmental Hospital: This hospital is located in Nablus. Established in 1976, this facility is equipped with 200 beds. There are 628 staff members employed at this hospital. This hospital includes 16 departments which are: general surgery department, specialized orthopedic surgery department, operation theaters, burns department, pediatric department, vascular department, postnatal and labor, emergency department, neurosurgery department, day-care department, out-patient's clinics, intensive care unit, ophthalmic department and plastic surgery department.

6. Arab Specialized Hospital: This hospital was established in 1997 in Nablus, offering extremely specialized surgical services. It is including 94 beds, its departments include: emergency, operation theaters, surgical departments, out-patient's clinics, cardiac care units, intensive care units, labor, and postnatal departments. Approximately 207 employees work in this hospital.

3.3 Target Population

Patients with colostomy in West-Bank.

3.3.1 Sampling Method and Sample Size

According to the Ministry of health, the total number of arranged colostomy surgeries during 2023 in West Bank was 120. G- Power program was used to calculate the sample size, based on Cohen's formula. According to this calculation 40 patients considered the sample size needed to achieve the goal of this study. The sample size was determined based on (0.05) significance level and 95% confidence interval. The convenience sampling method was used in this study; response rate was 92.5% so the sample size became 37.

Inclusion Criteria

All participants in this study are patients from both genders with a colostomy, who desire to communicate and participate, and their ages between 20-60 years old.

Exclusion Criteria

Patients with end-stage diseases, patients with cognitive and mental impairments, patients who participated in an educational session or training about colostomy before and those who will not communicate, and patients with physical impairment so they cannot take care of themselves.

3.4 Research Variables

Dependent Variables*:* patient's knowledge about colostomy care, and patient's ability to practice the right care for colostomy.

Independent Variable*:* Structured education, demographic data (age, gender, level of education, length of hospital stay, pre-operation education, and training on stoma care).

3.5 Pilot Study

Ten patients who met the same inclusion requirements as the whole study sample participated in a pilot trial. The goals of the pilot study were to determine whether patients comprehend the measurement instrument and identify any unclear or difficult-to-understand questions in the study tool, then Cronbach's alpha reliability test was performed for 13 questions and its result was 0.753, which indicates that questionnaire questions were internally consistent. The entire questions were understood by the patients, and the questionnaire had no unclear language. Also, a pilot study was conducted to determine whether the patients understood the educational booklet used in this study. All of the educational information included in the booklet was understood by the included patients. Patients from the pilot trial excluded from the research sample.

3.6 Data Collection

Data related to patient's knowledge and practices were assessed by using a questionnaire in Arabic language, back to back translation conducted for the questionnaire and it was reviewed by specialists in the field. This questionnaire includes demographic data in the first section (age, gender, period of colostomy presence, length of hospital stays post operation, education or training on colostomy care and patient's level of education). The second section includes questions to assess knowledge about normal colostomy (normal color of stoma, normal appearance, and normal peristomal skin). The third part includes questions to assess the patient's knowledge about colostomy complications (bleeding for more than 10 min, black color, and protrusion of colostomy more than 2 inches). The fourth section of the questionnaire assesses the daily practices during colostomy care (hand washing before and after stoma care, when changing colostomy bag, colostomy cleaning technique) and the last section includes questions about practices used to solve colostomy possible problems

(leakage, odor, and peristomal skin irritation). Scoring for patient's knowledge was marked as the following: all parts were added together, divided by the total number of questions, and the resulting scores were expressed as percentages. If the patient score was 50% or more indicate that patient knowledge and practice about colostomy was considered good and adequate and if the score was lower than 50% was considered unsatisfactory.

Direct patient interviews were used to complete the study's questionnaire. All eligible patients were informed about the study's objectives before data collection. Before applying the structured education, the study's nature and goals were described by the researcher to the patients at the beginning of the interview. The process of data collection conducted over two months from the end of December 2023 to the end of February 2024 and the patient's response rate was 92.5%.

Pre-Test phase

First of all, informed consent was obtained from the patients. The researcher divided the patients into small groups (2-4 patients) based on their presence in out patient's clinics on that day. Then researcher asked the patient to fill out the questionnaire. This phase was conducted on the first follow-up visit post-colostomy operation, which is usually within the first two weeks post-operation as mentioned in the literature (Burch, 2016).

Guidelines of Structured Education

A booklet in simplified Arabic language contains the instructional program constructed by the researcher. It was formed following a thorough examination of the available research utilizing a range of resources including expert consultation, the study of the available kinds of literature, and studies about colostomy care education. The validity and reliability of the booklet tested, by piloting the opinion of three PhD nurses, one oncology nurse, two medical surgical nurses, ten patients, one physician, and one nutritionist were taken into consideration.

The goal of the educational program was to give patients information that would improve their knowledge and practice ability to care for their colostomy every day. The booklet written in simple Arabic language contains an introduction about gastrointestinal tract anatomy and physiology, a definition and an indication of colostomy, types of colostomies, normal colostomy appearance and some complications, colostomy care steps, nutritional consideration, and daily activity changes post colostomy such as: as traveling, return to work, physical activity, and sexual life. It contains pictures to demonstrate the equipment and steps of colostomy care, and each patient was provided with a copy of this booklet. The educational program also provided practice on colostomy trainer manikin for each patient to train on the correct steps of colostomy care. Each group was given a 40 minutes educational session.

To control the extraneous factors, I asked all of the participants to use only the booklet as a source of information.

Implementation of the Educational Program Phase

A PowerPoint presentation was conducted by the researcher, and then a hard copy of an educational booklet about colostomy care including photographs provided for each attended patient, also each patient in the session practiced colostomy care on colostomy trainer manikin. Every educational program conducted in 40 minutes.

Post-Test Phase

This phase was conducted in the second follow-up visit which is usually three to four weeks post-operation as the literature illustrated (Burch, 2016). Knowledge and practice were assessed in the second appointment by using the same questionnaire used in the pretest phase.

3.7 Ethical Consideration

Participants were notified that their participation in this study is voluntary and that they have the ability and freedom to drop out of the study at any time they feel uncomfortable. Before beginning the data gathering process, the relevant institutions:

Institutional Review Board (IRB) approval was obtained from Arab American University and Hospitals. Participants were made aware that their answers remained anonymous and that we would not use them for personal issues. The study reports also did not include any information about the hospitals where the sample was collected. By assigning code numbers to each participant and securing the collected in a secured locker, in this way, the confidentiality and anonymity of the data were fully protected, also the code number used to prevent mixing the data in the pre intervention phase with post intervention data.

3.8 Data Analysis

The collected data was analyzed through the Statistical Package for Social Sciences (SPSS) version 20. Data was introduced in percentages, numbers, means, and standard deviations, and the significance between variables was presented by using the P value of 0.05. Frequency and percentage were used to describe the demographic characteristics of patients who participated in the study. The internal consistency of the used tool was assessed by using Cronbach's alpha coefficient test. Normality was examined by Kolmogorov-Smirnov, Shapiro-Wilk test, and then the Wilcoxon test was used to determine if there is a statistically significant difference in patient's knowledge and practice before and after the structured education implementation. In addition to the Mann-Whitney test and Kruskal-Walli's test.

Chapter Four

Results

This study is being carried out to determine if the implantation of a structured educational program affects patient's knowledge and practice regarding colostomy care.

This study results showed that patients with colostomy had a deficit of knowledge about colostomy care before education, and post the implementation of the educational program which consist of educational section for 40 minutes about colostomy care and practice on colostomy manikin, patients practice and knowledge improved scientifically.

The findings of this study are mentioned in two sections: the first contains statistics on the demographic characteristics of patients who visited out patient's clinics in the previously mentioned hospitals for follow-up post-colostomy formation, and the second section looks at the frequency and statistics of items related to colostomy care knowledge among patients and evaluates their practices accordingly.

4.1 Section1

Table 1 demonstrates that 45.9% of the study participants were middle-aged adults, 35.1% were old adults, and 18.9% were young adults. The percentage of males who participated in the study was 59.5%, while females' percentage was 40.5%. Only 16.2% were highly educated, 40.5% studied until secondary school, and 43.4% of them studied the basic school stage. 73% of participants stayed in the hospital for 15 days or less post-operation, while only 27% of them stayed in the hospital for more than 15 days. Only 16.2% of participants received ordinary verbal instructions before surgery while 83.8% did not receive them. Colostomy indication due to malignancy form 75.6% of study participants and the rest of them had colostomy for other causes such as injuries and inflammatory bowel diseases.

Table 1: Frequency Distribution of Patient's Demographic Characteristics.

Variables		Frequency(n)	Percentage %
Age	Young Adults	7	18.9%
	Middle Adults	17	45.94%
	Old Adults	13	35.13%
	Gender		
	Male	22	59.5%
	Female	15	40.5%
Educational level	Elementary school	16	43.2%
		15	40.5%
	Secondary school	6	16.2%
	High education		
Ordinary verbal Instructions before Surgical interventions	Yes	6	16.2%
	No	31	83.8%
Hospital stays post operation	0-15 days	27	73%
	more than 15 days	10	27%
Colostomy Indication	Malignancy	28	75.6%
	Other	9	24.4%

Table 2 illustrates the percentage of the first part of the questionnaire which assessed the patient's knowledge about colostomy care before the educational program. The first three questions assessed the patient's knowledge about stoma complications. The results have shown that 51.4% of the participants did not know that the black color stoma was considered a complication, 37.8% knew that it is an abnormal stoma while 10.8% answered that it is a normal stoma color. In the questions that evaluated the patient's knowledge about the normal elevation of the stoma above the skin surface, 10.8% knew the normal stoma height, 21.6% answered that a stoma elevation of more than 2-inch is considered normal, and 67.6% of them responded with I did not know. Regarding the patient's knowledge about the occurrence of bleeding for more than 10 minutes from a stoma as a complication, only 27%

of participants knew that it was an abnormal finding, 24.3% considered it as a normal finding and 48.6% responded with “I don’t know”.

Table 2: Frequency of Patient’s Knowledge Regard Stoma Complications Before Education (N=37).

Item	F Yes	% Yes	F No	% No	F I don’t know	% I don’t know
Black colored stoma is normal	9	24.3%	10	27%	18	48.6%
Stoma protruded >2 inch is normal	4	10.8%	8	21.6%	25	67.6%
Continued bleeding from stoma for more than 10 minutes	4	10.8%	14	37.8%	19	51.4%

F: Frequency
%: Percentage

Table 3 describes the frequencies of the second three questions of the participant’s knowledge regarding colostomy normal appearance. Results revealed that only 32.4% of the patients knew the normal color of the stoma and the rest of them responded with “I don’t know”. The percentage of patients who answered that the normal appearance of the stoma was shiny and moist was 27%, 62.2% of them responded with “I don’t know” and 10.8% answered that the presence of a cut on the stoma was considered a normal appearance. Regarding peristomal skin condition, 29.7% knew that it should be the same as the rest of the skin, 59.5% did not know the condition of the skin around the stoma and 10.8% answered that the skin around the stoma's normal color is red.

Table 3: Frequency of Patient's Knowledge Regard Normal Stoma Appearance Before Education (N=37).

Item	0F	0 %	1F	1 %	2F	2 %	3F	3 %
Color of normal stoma	12	32.4%	0	0%	0	0%	25	67.6%
Appearance of normal stoma	10	27%	0	0%	4	10.8%	23	62.2%
Normal peristomal skin condition	11	29.7%	4	10.8%	0	0%	22	59.5%

Red=0, Pale=1, Black=2, Don't know=3
Shiny and moist=0, Has nodules=1, Has cuts and torn=2, Don't know=3
Similar to other skin=0, Red=1, Painful to touch=2, Don't know=3

Table 4 describes the frequency of participants' responses to the questions that assessed their knowledge about normal stoma appearance and stoma complications post the implementation of the structured education. Post education the percentage of patients who knew that the black color and bleeding for more than 10 minutes were considered a complication was 94.6% while only 5.4% responded that black color was not considered a complication. 91.9% of patients responded post-education that stoma elevation from the abdominal surface for more than 2 inches considered normal while 8.1% responded as an abnormal finding.

Table 4: Frequency of Patient's Knowledge Regarding Stoma Complications Post Education (N=37).

Item	F Yes	% Yes	F No	% No	F I don't know	% I don't know
Black colored stoma is normal	2	5.4%	35	94.6%	0	0%
Stoma protruded >2 inch is normal	34	91.9%	3	8.1%	0	0%
Continued bleeding from stoma for more than 10 minutes	2	5.4%	35	94.6%	0	0%

Table 5 demonstrates the frequencies of participant's knowledge regarding colostomy's normal appearance post-education, 81.1% of patients knew that the normal color of a stoma is bright red, 10.8% responded that the stoma normally looked pale and only 8.1% responded

that they did not know the normal stoma color. The percentage of patients who knew that the stoma appearance should be moist and shiny was 83.8%. 8.1% responded that the presence of cuts was considered a normal appearance, 2.7% said that the presence of nodules was normal while 5.4% did not know the normal appearance of the stoma.

Table 5: Frequency of Patient's Knowledge Regarding Normal Stoma Appearance Post Education (N=37).

Item	0 F	0 %	1 F	1 %	2 F	2 %	3 F	3 %
Color of normal stoma	30	81.1%	4	10.8%	0	0%	3	8.1%
Appearance of normal stoma	31	83.8%	1	2.7%	3	8.1%	2	5.4%
Normal peristomal skin condition	33	89.2%	0	0%	0	0%	4	10.8%

Red=0, Pale=1, Black=2, Don't know=3
Shiny and moist=0, Has nodules=1, Has cuts and torn=2, Don't know=3
Similar to other skin=0, Red=1, Painful to touch=2, Don't know=3
%Percentage
F Frequency

Table 6 illustrates the frequencies of patient's responses regarding the daily practices of stoma care, in the pre-education phase the percentage of patients who washed their hands before colostomy care was 35.1%, while 64.9% did not wash their hands before colostomy care. After colostomy care 91.9% of patients washed their hands and 8.1% did not wash their hands. Most of the patient 94.6% empty their stoma bag when it is totally full and 5.4% of them empty their stoma bag when it is half-filled.

Table 6: Frequency of Daily Practices Regarding Colostomy Care in The Pre-Education Phase (N=37).

Item	F		%	
	Yes	No	Yes	No
Handwashing before the procedure?	13	24	35.1%	64.9%
Handwashing after the procedure?	34	3	91.9%	8.1%

Item	0 F	0 %	1 F	1 %	2 F	2 %

Practice of emptying stoma pouch?	35	94.6%	2	5.4%	0	0%
Technique of cleaning stoma?	27	73%	10	27%	-------	--------

Totally full =0, Half-filled =1, One third full =2.
Peripheral to center =0, center to peripheral =1.
% Percentage
F Frequency

Table 7 demonstrates the frequencies of patient's practices that related to physical complications managements before education implementation. Practices related to skin irritation problem results revealed that 81.1% visited the clinics when they faced this problem, 10.8% of them changed the base and the bag only 8.1% used the stoma powder. Practices most of the participated patients used to manage leakage problem was reducing the size of the opening of the pouch as 75.7% used it. 24.3% used a two-piece pouch while no one of them managed this problem by checking the adhesive pad for a proper seal or other interventions. To solve the odor problem, 40.5% of patients managed this problem by changing their diet, 32.4% of them increased their fluid intake, 16.2% used deodorant and 10.8% used other interventions to solve the odor problem.

Table 7: The Frequencies of Patient's Practices Related to Stoma Physical Complications Management Pre- Education (N=37).

Item	0 F	0 %	1 F	1 %	2 F	2 %	3 F	3 %
Practice regarding skin irritation problem	3	8.1%	30	81.1%	4	10.8%	0	0%
Practice regarding solving leakage	28	75.7%	9	24.3%	0	0%	0	0%
Practice regarding solving odor	15	40.5%	12	32.4%	6	16.2%	4	10.8%

Use of stoma powder =0, Attend stoma clinic =1, Clean stoma and change pouch if liquid seeps under barrier =2, Others =3.
Reducing size of aperture of flange of pouch =0, Use 2-piece pouch =1, Check adhesive pad for proper seal =2, Other =3.
Change diet =0, Increased fluid intake =1, Use deodorant =2, Others =3.
% Percentage
F frequency

Table 8 illustrates the frequencies of patient's responses regard the daily practices of stoma care post-education implementation. All of the patients after education were committed to washing their hands before and after colostomy care. All of patients post-education went to empty the colostomy bag when it was one-third filled and all of them cleaned the colostomy opening from center to peripheral.

Table 8: Frequencies of Patient's Responses Regarding Daily Practices of Stoma Care Post Education (N= 37).

Item	F		%	
	Yes	No	Yes	No
Handwashing before procedure?	37	0	100%	0%
Handwashing after the procedure?	37	0	100%	0%

Item	0 F	0 %	1 F	1 %	2 F	2 %
Practice of emptying the stoma pouch?	0	0%	0	0%	37	100%
The technique of cleaning stoma?	0	0%	37	100%	-------	--------

Totally full =0, Half-filled =1, One third full =2.
Peripheral to center =0, center to peripheral =1.

Table 9 describes the frequencies of patient's practices related to physical complications management post-education. The majority of participants 78.4% used stoma powder to solve skin irritation problem while 16.2% attended clinics to solve this problem and 5.4% used other interventions. To solve leakage most of the patients measured the opening correctly and reduced the size of the opening by 91.1% while only 10.8% used two pieces of pouch to solve it. Regarding solving odor, 91.9% changed their dietary habits while only 8.1% increased their fluids intake to solve odor.

Table 9: The frequencies of Patient's Practices Related to Stoma Physical Complications Management Post Education (N=37).

Item	0 F	0 %	1 F	1 %	2 F	2 %	3 F	3 %
Practice regarding skin irritation problem	29	78.4%	6	16.2%	0	0%	2	5.4%
Practice regarding solving leakage	33	89.2%	4	10.8%	0	0%	0	0%
Practice regarding solving odor	34	91.9%	3	8.1%	0	0%	0	0%

Use of stoma powder =0, Attend stoma clinic =1, Clean stoma and change pouch if liquid seeps under barrier =2, Others =3.
Reducing the size of the aperture of flange of pouch =0, Use 2-piece pouch =1, Check adhesive pad for proper seal =2, Other =3.
Change diet =0, Increased fluid intake =1, Use deodorant =2, Others =3.

4.2 Section 2

Table 10 demonstrates the difference in mean between patient's knowledge and practice before and after the implementation of the educational program, which showed the mean difference was 3.86 between means and there was a statistically significant difference between the total score of patient's knowledge as Mann-Whiteny Wilcoxon test P value was less than 0.05. The mean difference was 3.297 between means and there was a statistical significance difference between total practice scores before and after the educational program as the P value =0.001 by using Wilcoxon test.

Table 10: The Difference in Mean Between Patient's Total Knowledge Score, Practice Scores Before and After Structured Education Implementation (N=37).

Variable	M	SD	Z	P
Pretest Knowledge	1.541	1.980	- 4.907a	< 0.001
Posttest Knowledge	5.432	1.214		
Mean difference	3.86			
Pretest Practice	2.2703	.87078	-5.258	< 0.001
Posttest Practice	5.5676	1.16763		
Mean difference	3.297			

a. Based on negative ranks.
b. Wilcoxon Signed Ranks Test

Table 11 illustrates the difference between males and females in the acquisition of knowledge and practice post the implementation of the structured educational program, Mann-Whitney test was used and the result revealed that there was no difference between both genders in knowledge and practice acquisition as the P value was >0.05.

Table 11: The Difference Between Gender and The Acquisition of Knowledge and Practice Post Education.

	Gender	N	Mean Rank	Test Statistics	Post.test.K	Post.test.P
Post.test.K	Male	22	21.50	Mann-Whitney U	110.000	148.000
	Female	15	19.33			401.000
	Total	37		Z	-2.116	-0.733
Post.test.P	Male	22	18.23	Asymp. Sig. (2-tailed)	0.343	0.463
	Female	15	20.13	Exact Sig. [2*(1-tailed Sig.)]	0.092	0.614
	Total	37				

a. Not corrected for ties.
b. Grouping Variable: Gender

Table 12 illustrates the difference between age groups and the acquisition of knowledge and practice post-education. The results of the Kruskal Wallis test showed that there was no difference between the different age groups and the acquisition of knowledge and practice post-education, as the P value was >0.05 for both practice and knowledge.

Table 12: The Difference Between Age Groups and The Acquisition of Knowledge and Practice Post Education.

	New age group	N	Mean Rank	Test Statistics	Post.test.K	Post.test.P
Post.test.K	Young	7	17.93	Chi-Square	1.366	4.026
	Middle	17	17.71	df	2	2
	OLD	13	21.27	Asymp. Sig.	0.505	0.134
	Total	37				
Post.test.P	Young	7	14.36			
	Middle	17	18.88			
	OLD	13	21.65			
	Total	37				

a. Kruskal Wallis Test
b. Grouping Variable: New age group

Table 13 demonstrates the difference between the acquisition of knowledge and practice post-education and different educational levels. As Kruskal Wallis test results showed that there was no difference between the educational levels and acquisition of both knowledge and practice, the P value results greater than 0.05.

Table 13: The Difference between Acquisition of Knowledge and Practice Post Education and Different Educational Levels.

	Education	N	Mean Rank	Test Statistics	Post.test.K	Post.test.P
Post.test.K	Elementary	16	16.94	Chi-Square	1.857	6.806
	Secondary	15	21.20	df	2	2
	high education	6	19.00	Asymp. Sig.	0.395	0.330
	Total	37				
Post.test.P	Elementary	16	15.94			
	Secondary	15	23.00			
	high education	6	17.17			
	Total	37				

a. Kruskal Wallis Test
b. Grouping Variable: Education

Table 14 illustration of the difference in knowledge and practice acquisition post-education and receiving a pre-operation ordinary verbal instruction, the results of the Mann-Whitney U test revealed that there was no difference in knowledge and practice acquisition and receiving an ordinary verbal instruction pre-surgical intervention as the P value was >0.05.

Table 14: The difference in knowledge and practice acquisition post education and receiving a pre-operation education.

	Have you received a pre-operation ordinary verbal instructions	N	Mean Rank	Test Statistics	Post.test.K	Post.test.P
Post.test.K	Yes	6	24.50	Mann-Whitney U	60.000	69.000
	No	31	17.94	Wilcoxon W	556.000	565.000
	Total	37		Z	-1.691	-1.379
Post.test.P	Yes	6	23.00	Asymp. Sig. (2-tailed)	0.091	0.168
	No	31	18.23	Exact Sig. [2*(1-tailed Sig.)]	0.185	0.342
	Total	37				

a. Not corrected for ties.
b. Grouping Variable: have you received a pre operation education.

Table 15 describes the difference in knowledge and practice acquisition and the length of hospital stay post-operation, the results found that the knowledge and practice acquisition was the same between patients who stayed in the hospitals for 15 days and others who stayed for a period longer than 15 days, the P value was >0.05.

Table 15: The Difference in Knowledge and Practice Acquisition and The Length of Hospital Stay Post-Operation.

	Period of hospital stay post operation	N	Mean Rank	Test statistics	Post.test.K	Post.test.P
Post.test.K	day-15	27	18.19	Mann-Whitney U	113.000	95.000
	more than 15	10	21.20	Wilcoxon W	491.000	473.000
	Total	37		Z	-0.936	-1.907
Post.test.P	day-15	27	17.52	Asymp. Sig. (2-tailed)	0.349	0.056
	more than 15	10	23.00	Exact Sig. [2*(1-tailed Sig.)]	0.468a	0.180a
	Total	37				

a. Not corrected for ties.
b. Grouping Variable: period of hospital stay post operation

Table 16 describes the presence of correlation between knowledge and practice in the post-education phase. The results revealed that there was a strong correlation between post-education knowledge post post-education practice.

Table 16: The Correlation Between Knowledge and Practice in The Post-Education Phase.

Variables	Spearman's rho	Sig. (2-tailed)
Posttest K * Posttest P	0.621**	0.000
Posttest P * Posttest K	0.547**	0.000

**Correlation based on P < 0.01

Chapter Five

Discussion and Conclusion

A discussion of the results and the supporting evidence for study findings have been provided in this chapter. This study aimed to assess the effectiveness of structured education on patient's knowledge and practice regarding colostomy care.

Colostomy formation is considered a life changing event as those patients face changes in all aspects of life including social, sexual, physical, and psychological (Elesawy et al., 2022). Nurses play a very important role in helping stoma patients to adapt to these huge changes (Lim, Chan et al., 2015). Patient's education can lead to a greater understanding of patients toward their disease, self-care management, and increase their treatment adherence (Seyedin et al., 2015). So, this study was performed to determine the effectiveness of structured education on patient's knowledge and practice regarding colostomy care.

The results of this study revealed that the highest percentage of patients were middle-aged adult's group, those aged between 31-45 years old. The age group classification adopted in this study was based on (Bhat, D., et.al 2016) facial age classification. This result coincides with the results of (Abdelmohsen, 2020) who found that most affected patients their aged between 31-40 years. This study also found that males are affected more than females, as their percentage was 59.5% while females 40.5%, this result is consistent with the results of (Mohamed et al., 2017; Abdelmohsen, 2020) as they both found that males were the majority. Also, these results were supported by (El-Sayead Shrief & Mokhtar Mokhtar, 2019) study findings as they found that over fifty percent of their sample were above thirty and males. On the other hand, this study's results contradicted (Kumar, 2016) results as their sample ages were above fifty and the majority of them were females.

The majority of this study population have an elementary school education this study finding is compatible with other studies conducted in Egypt by (Abdelmohsen, 2020;

Mohamed et al., 2017), this may be pertaining to almost similar cultural background. The proportion of patients with colostomy due to malignancy was 75.6% and other indications of colostomy creation formed 24.4%, previous study conducted on colostomy patients revealed that the major cause of colostomy formation was related to malignancy (Abdelmohsen, 2020, Silva et al., 2019). While Engida, et al., (2016) found in their study that the major indication for colostomy was emergency conditions such as volvulus which disagreed with this study's findings.

Most of the participants 73% in this study stayed in the hospitals for less than 15 days and the rest of the participants 27% stayed for more than 15 days, only 16.2% of participated patients received ordinary instruction before surgical intervention while 83.8% didn't receive instructions, these findings compatible with Neelam et al., (2020) study results. However, these findings contradicted Pandey et al., (2015) results as they illustrated in their study that the majority of patients received an education before the operation.

This study demonstrated that the majority of patients before the structured education responded to the questions about the normal appearance of stoma didn't know or incorrectly compatible with (Neelam et al., 2020) study findings, while it's contradicted (Pandey et al., 2015; Habiba et al., 2021) results as their studies revealed that more than the half of the patients knew the normal stoma characteristics.

In this study, patients before the implementation of the structured education showed incorrect answers or responded with did not know regarding the practices of colostomy care. These findings were supported by the results of (Habiba et al., 2021) study which demonstrated that the minority of patients provided accurate and comprehensive responses to all questions on colostomy care.

Regarding solving complications including: odor, skin irritation, and leakage. This study revealed that most patients before the implementation of the educational program

incorrectly answered the questions assessed these complications management. These findings were supported by the results of Hegazy et al., (2014) who found that the majority of patients had lack of knowledge regarding solving complications including gas and odor, before the execution of guidelines about colostomy care.

The majority of patients lacked knowledge regarding colostomy care before the implementation of the educational program. These findings were in the same line with the results of a previous study conducted by (El Sayed et al., 2017; El-Sayead Shrief & Mokhtar Mokhtar, 2019). All of them demonstrated that patient's level of knowledge was unsatisfactory.

Knowledge scores and practice scores after the implementation of the structured patient education showed a highly statistically significant difference from those scores of knowledge and practice before the implementation of the structured education. A study conducted in Egypt by Elesawy et al., (2022) found that the educational program has a statistically significant improvement in colostomy patient's knowledge, practice, and self-efficacy. These findings supported this study's results and consist with it as (Chauhan et al., 2017) study found that patients gained knowledge through subjects about colostomy care which came in line with this study's findings. Another study conducted by Cheng et al., (2012) in China revealed that expert patient program has a high statistical impact on patient's knowledge about stoma care in addition to their self-management and self-efficacy which validated this study's findings. Also, a study performed by (Nygren et al., 2012) concluded that the implementation of educational instructions improved the patient's practices regarding colostomy care. Lo et al. (2010) demonstrated that informatory training improved the efficacy of self-care in stoma patients. The study finding was also supported by the results of Hegazy et al. (2014) as their study revealed that teaching instructions had a favorable impact on the permanent colostomy patient's knowledge, practices, and self-efficacy.

Regarding practice, a study conducted by Grant et al. (2013) found that the majority of their interventional group who had a program about ostomy self-management were fully able to care for themselves.

The results of this study revealed that there was no statistical difference between males and females, different age groups, educational level, pre-surgery ordinary verbal instructions, and the period of hospital stay post-operation in knowledge and practice acquisition after the implementation of the structured educational program. These finding supported by the results of Rafii et al., 2011 and Wu et al., 2007 as they found that there was no statistically significant difference in self-efficacy of colostomy care between these different demographics characteristics. Another study conducted by Chauhan et al. (2017) found that there was no difference in the level of knowledge between patients from different age groups. On the other hand, this study's findings contradicted El-Sayead Shrief et al. (2019) results which demonstrated that there was a statistically significance difference between genders in the acquisition of practice. Also, these findings disagreed with (Chauhan et al., 2017) who demonstrated a presence of a positive and significant correlation between knowledge and patient's level of education.

This study showed that in the post-education phase, there was a strong correlation between practice and knowledge, this finding incoherence with the result of Qalawa et al. (2019; Almanzalawy et al. (2020), as they found a statistically significant association between patient's knowledge and practice post the implementation of education.

Based on these findings that demonstrated the positive impact of structured education on patient's knowledge and practice regarding colostomy care. This pressing the necessity of developing educational programs in all health sectors that aim to enhance patient's self-care ability and knowledge regarding colostomy.

5.1 Conclusion

Based on the study's findings, it is evident that structured education plays a significant role in improving patient knowledge and practice regarding colostomy care. The study showed that prior to receiving structured education, patients lacked adequate understanding of colostomy care, resulting in incorrect responses and uncertainty about normal stoma appearance, care practices, and complication management. This study revealed that there was a lack of knowledge and practice in colostomy care among colostomy patients in the West Bank. The structured educational program conducted in this study significantly affects the patient's level of knowledge and daily practices regarding colostomy care. However, after the implementation of structured education, there was a substantial improvement in both patient knowledge and practice scores. This improvement was an indication of the effectiveness of the educational program in enhancing patient's understanding and ability to manage their colostomies effectively.

5.2 Recommendations

1. Provide a structured education for all colostomy patients before discharge from hospitals.
2. Carry out workshops about colostomy care and daily life activity modification that all patients need post-colostomy surgery for nurses.
3. Carry out new research to investigate patient's knowledge and practices of all stoma types.
4. Creating a unified structured educational program by the quality department in the Ministry of Health to apply it to all hospitals in the West Bank.
5. It is necessary for every hospital to hold a regular scientific workshop including doctors, nurses, and nutritionists to discuss the needs of colostomy patients and implant a strategic plan, and execute it in reality.

5.3 Limitations of the Study

1. The difficulty was in gathering all colostomy patients in each region in the same place to provide structured education for them in the same educational session.
2. The study was conducted only in the West Bank. Centers of the Gaza Strip and Jerusalem were excluded due to the Israeli occupation and the difficulty in getting permission to reach there.
3. The prevailing political situation in the area greatly limits transportation between cities which limits the ability to follow the patients for longer periods.
4. Small sample size. The difficulty of using randomized sampling technique due to small sample size, so convenience sample method used, which consider a limitation of conducting a randomized control trail study.

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Appendices

Appendix 1: The Questionnaire

Deanship of Graduate Studies

Arab American University

Effectiveness of Structured Education on Patient's Knowledge and Practice Regarding

Colostomy Care

الاستبيان

Section A: Demographics

ضع دائرة حول الإجابة:

الجنس □ ذكر □ أنثى

المستوى التعليمي □ المرحلة الأساسية □ المرحلة الثانوية □ التعليم العالي

تلقيت تعليم قبل الخضوع للعملية □ نعم □ لا

المدة الزمنية للإقامة بالمستشفى بعد العملية □ أقل من 15 يوم □ أكثر من 15 يوم

العمـــر □20-30 □ 31−45 □ 46 فما فوق

سبب عمل فتحة القولون □ وجود ورم في القولون والمستقيم □ غير ذلك

Section B: Knowledge Regarding Complication of Stoma

المعرفة بالمضاعفات المحتملة لوجود فتحة القولون

فتحة القولون ذات اللون الأسود تعتبر طبيعية □ لا □ نعم □ لا أعلم

فتحة القولون البارزة لأكثر من 2سم عن سطح الجلد يعتبر طبيعي □ لا □ نعم □ لا أعلم

وجود نزيف دموي من الفتحة لأكثر من 10 دقائق يعتبر طبيعي □ لا □ نعم □ لا أعلم

Knowledge Regarding Normal Stoma

المعرفة بالشكل الطبيعي لفتحة القولون

اللون الطبيعي لفتحة القولون □ أسود □ شاحب □ أحمر □ لا أعلم

الشكل الطبيعي لفتحة القولون □ وجود جروح □ وجود نتوءات □ لامعة ونضره □ لا أعلم

الحالة الطبيعية للجلد المحيط بفتحة القولون □ مؤلم عند اللمس □ أحمر □ مماثل لبقية الجلد □ لا أعلم

Section C: Daily Care Practices

الممارسات اليومية للعناية بفتحة القولون

1) **غسل اليدين قبل البدء بعملية العناية بالفتحة؟** □ نعم □ لا

2) **غسل اليدين بعد الانتهاء من العناية بفتحة القولون؟** □ نعم □ لا

3) **يتم افراغ كيس الفتحة؟** □ عندما يمتلئ كليا □ عندما يمتلئ نصفه □ عند امتلاء الثلث

4) **الطريقة الصحيحة لتنظيف فتحة القولون؟** □ من محيط الفتحة الى مركزها □ من مركز الفتحة إلى محيطها

Practices Regarding Physical Problem Management

الممارسات المتعلقة بإدارة المشكلات الجسدية المتعلقة بفتحة القولون

5) **هل تعاملت مع مشكلة متعلقة بفتحة القولون؟**

□ نعم □ لا

6) **المشكلة التي تعرصت لها؟**

□ التسريب. □ تهيج الجلد المحيط بفتحة القولون. □ الرائحة.

7) **الممارسات المتعلقة بحل مشكلة تهيج الجلد:**

□ استخدام الباودر المخصص بالفتحة.

□ تغيير الكيس والتنظيف في حال حدوث تسريب تحته. □ الذهاب لمراجعة العيادة.

□ غير ذلك.

8) **الممارسات المتعلقة بحل مشكلة التسريب:**

□ تقليل حجم فتحة الكيس. □ استخدام الكيس ذو القطعتين.

□ التأكد من التصاق القاعدة جيدا. □ غير ذلك.

9) **الممارسات المتعلقة بحل مشكلة الرائحة:**

□ تغيير النظام الغذائي. □ زيادة شرب السوائل.

□ استخدام مزيل العرق المخصص للفتحة. □ غير ذلك.

Appendix 2: IRP Approval

Arab American University
Institutional Review Board - Ramallah

الجامعة العربية الأمريكية
مجلس اخلاقيات البحث العلمي – رام الله

IRB Approval Letter

Study Title: "Effectiveness of structured education on patient's knowledge and practice regarding colostomy care in West-Bank"

Submitted by: Areefah Afeef Musbah Abu Karsh

Date received: 5th December 2023

Date reviewed: 10th December 2023

Date approved: 28th December 2023

Your Study titled **"Effectiveness of structured education on patient's knowledge and practice regarding colostomy care in West-Bank"** with archived number R-2023/B/1/N was reviewed by the Arab American University IRB committee and was approved on the 28th December 2023.

الجامعة العربية الأمريكية - فلسطين
مجلس اخلاقيات البحث العلمي - رام الله
IRB-R
ARAB AMERICAN UNIVERSITY-PALESTINE
INSTITUTIONAL REVIEW BOARD - RAMALLAH

Sajed Ghawadra, PhD
IRB-R Chairman
Arab American University of Palestine

General Conditions:

1. Valid for 6 months from the date of approval.
2. It is important to inform the IRB-R with any modification of the approved study protocol.
3. The Bord appreciates a copy of the research when accomplished.

رام الله – فلسطين
Tel: 02-294-1999 **E-Email:** IRB-R@aaup.edu **Website:** www.aaup.edu

Appendix 3: Letters to Facilitate Study Tasks

Arab American University
Faculty of Graduate Studies

الجامعة العربية الأمريكية
كلية الدراسات العليا

2024/1/2

الى من يهمه الامر

تسهيل مهمة بحثية

تحية طيبة وبعد،

تُهديكم كلية الدراسات العليا في الجامعة العربية الأمريكية أطيب التحيات، وبالإشارة الى الموضوع أعلاه، تشهد كلية الدراسات العليا في الجامعة أن الطالبة **عريفة عفيف مصباح أبو كرش** والتي تحمل الرقم الجامعي 202112784 هي طالبة ماجستير في تمريض البالغين وتعمل على رسالة الماجستير الخاصة به بعنوان:

" فاعلية التعليم المنظم على معرفة المرضى وممارساتهم المتعلقة بالعناية بفتحة القولون "تحت إشراف الدكتور ريحي بشارات .نأمل من حضرتكم الإيعاز لمن يلزم لمساعدتها للحصول على المعلومات اللازمة للدراسة، علماً أن المعلومات ستستخدم لغاية البحث فقط وسيتم التعامل معها بغاية السرية، وقد أعطيت هذه الرسالة بناء على طلبها.

وتفضلوا بقبول فائق الاحترام

ق.أ. عميد كلية الدراسات العليا

د. حسين الأحمد

كلية الدراسات العليا
FACULTY OF GRADUATE STUDIES

Jenin Tel: +970-4-2418888 Ext.:1471,1472 Fax: +970-4-2510810 P.O. Box:240
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E-mail: FGS@aaup.edu ; PGS@aaup.edu Website: www.aaup.edu

State of Palestine
Ministry of Health
Education in Health and Scientific
Research Unit

دولة فلسطين
وزارة الصحة
وحدة التعليم الصحي
والبحث العلمي

Ref.: ....
Date:..................

الرقم: ع ت/ ٣٥ / ٢٠٢٤
التاريخ: ٢٠٢٤/١/١٩

عطوفة الوكيل المساعد لمجمع فلسطين الطبي المحترم،،،
الوكيل المساعد لشؤون المستشفيات والطوارئ المحترم،،،
تحية واحترام..

الموضــوع: تسهيل مهمة بحث

يرجى تسهيل مهمة الطالبة: **عريفة ابو كرش – ماجستير تمريض البالغين**– الجامعة العربية الامريكية، بعنوان:

" فاعلية التعليم المنظم على معرفة المرضى وممارساتهم المتعلقة بالعناية بفتحة القولون"

حيث ستقوم الطالبة بجمع معلومات عن طريق تعبئة استبانة الدراسة من قبل المرضى (بعد اخذ موافقتهم)، وذلك في:

- **مستشفى رفيديا – مستشفى عاليه**
- **مجمع فلسطين الطبي**

مع العلم ان مشرف الدراسة: د. ربحي بشارات،
على ان يتم الالتزام بالمحافظة على اخلاقيات البحث العلمي وسرية المعلومات، وعدم التعرض للمعلومات التعريفية للمشاركين.
على ان يتم تزويد الوزارة بنسخة PDF من نتائج البحث، التعهد بعدم النشر لحين الحصول على موافقة وزارة الصحة.

مع الاحترام...

د. عبد الله القواسمي
رئيس وحدة التعليم الصحي والبحث العلمي

نسخة: ق. ا. عميد الدراسات العليا المحترم/ الجامعة العربية الامريكية

Telfax.:09-2333901 scientificresearch.dep@gmail.com 09-2333901 :تلفاكس

Appendix 4: Colostomy Care

العناية بفتحة القولون

إعداد: عريفة أبو كرش

المحتويات:

- تقديم.
- مقدمة حول الجهاز الهضمي: مكونات القناة الهضمية، مراحل عملية الهضم، المشاكل الصحية التي تصيب القولون.
- تعريف فتحة القولون.
- أسباب عمل فتحة في القولون.

أنواع فتحة القولون. -

- الشكل الطبيعي لفتحة القولون.

الأدوات اللازمة للعناية بالفتحة. -

خطوات العناية بالفتحة.-

الاعتبارات التغذوية.-

النشاطات اليومية. -

المضاعفات المحتمل حدوثها لفتحة القولون. -

تقديم:

تم إعداد هذا الكتيب لتزويد المرضى بالمعلومات الكافية عن فتحة القولون، بهدف تحسين جودة الحياة بعد إجراء العملية الجراحية. يحتوي على معلومات تبدأ حول الجهاز الهضمي وتعريف عملية فتحة القولون وإعتبارات عملها. يزودك الكتيب وعائلتك الإجابة عن تساؤلاتكم لأننا نعرف أن هذا وقت صعب عليكم.

عريفة أبو كرش

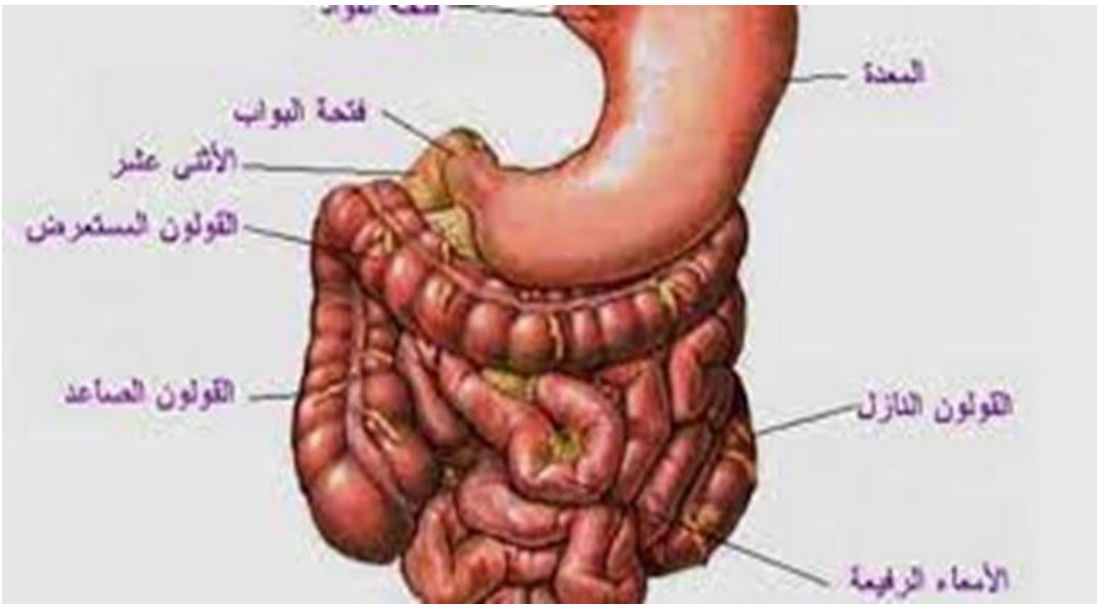
مرشح لنيل درجة الماجستير في تخصص تمريض الجراحة والباطني / الجامعة العربية الامريكية

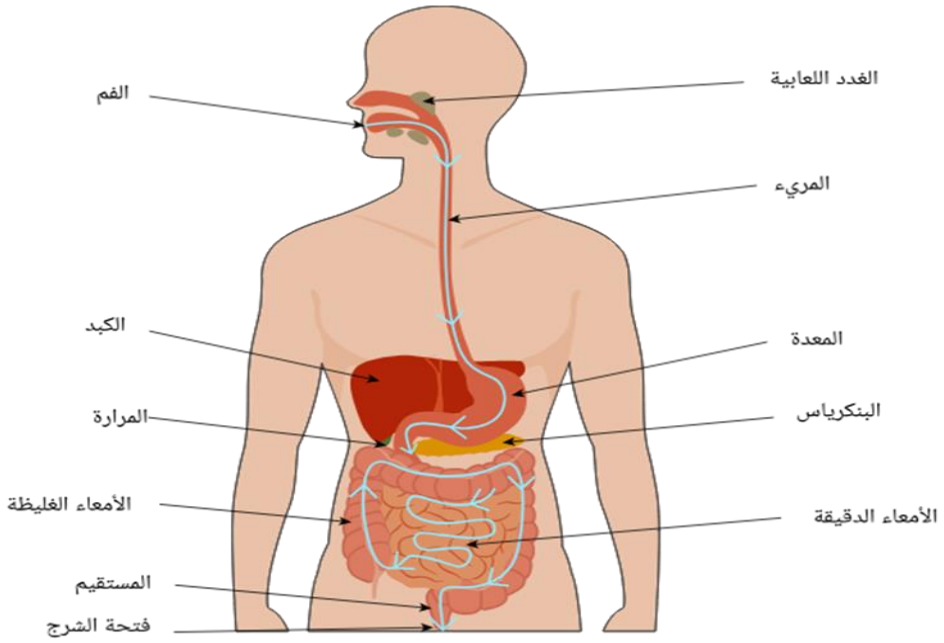
رام الله – فلسطين

مقدمة حول الجهاز الهضمي:

أجزاء الجهاز الهضمي:

القناة الهضمية تتكون من : الفم، المريء، المعدة، الأمعاء الدقيقة، الأمعاء الغليظة، المستقيم ، فتحة الشرج.





مراحل عملية الهضم:

تبدأ عملية الهضم من الفم، حيث يتم تقطيع الطعام وطحنه بواسطة الأسنان ومزجه باللعاب، ثم ينتقل الطعام من الفم إلى المعدة من خلال المريء.

تستمر عملية الهضم في المعدة حيث يتحول الطعام إلى سائل، ثم ينتقل إلى الأمعاء الدقيقة التي يحدث فيها استكمال عملية الهضم بمساعدة مواد تفرز من البنكرياس والكبد، ثم يتم امتصاص المواد الغذائية وانتقالها إلى الدم لتغذية الخلايا.

لدى وصول الطعام المتبقي دون هضم إلى الأمعاء الغليظة يتم امتصاص الماء منه، وتجميع البراز الذي ينتقل بعدها للمستقيم ثم التخلص من هذه الفضلات الصلبة من خلال فتحة الشرج.

الأمعاء الغليظة (القولون):

يبلغ طول الأمعاء الغليظة 1.5 متر، حيث تشكل خمس القناة الهضمية. تقسم الأمعاء الغليظة إلى أربعة أجزاء: القولون الصاعد، القولون المستعرض، القولون النازل، المستقيم.

وظائف القولون:

- يلعب دوراً مهماً في امتصاص الماء من بقايا الطعام المهضوم.
- امتصاص وإنتاج الفيتامينات (فيتامين ك، فيتامين ب و البايوتين) من خلال البكتيريا النافصة الموجودة في القولون.
- تشكيل البراز ودفعه نحو المستقيم للتخلص منه.

المشاكل الصحية التي تصيب الأمعاء الغليظة (القولون):

- القولون العصبي.
- داء هرشسبرنج الذي يصيب النهايات العصبية المغذية للقولون.
- الرتوج (الجيوب) في جدار القولون.
- التهاب القولون التَقرحي.
- أورام القولون.

تعريف فتحة القولون:

هي عبارة عن فتحة في جدار البطن يتم عملها جراحياً في جزء من القولون لإخراج البراز، حيث يتوقف الإخراج من خلال فتحة الشرج.

(Januário De Sousa et al., 2016)

وجود هذه الفتحة قد يكون مؤقتاً يتم وصل طرفي القولون مع بعضها بعد الشفاء خلال أسابيع، أشهرأو سنوات ويمكن أن تبقى بشكل دائم.

(Abdelmohsen, 2020)

أسباب عمل فتحة في القولون:

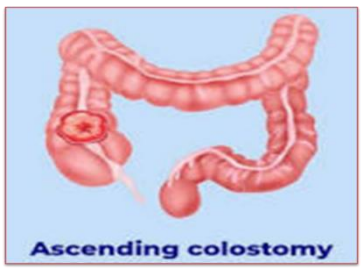
من أهم المشاكل الصحية التي تعتبر سبباً لعمل فتحة في القولون وجود ورم في القولون، دمار في الأمعاء نتيجة الإشعاع، وجود مرض التهابي مزمن في الأمعاء، التعرض لضربة أو وجود جيوب (رتوج) في جدار القولون.

(Claessens et al, 2015)

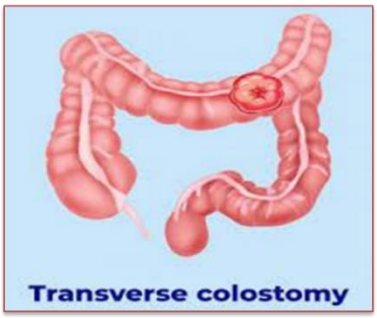
أنواع فتحة القولون:

تختلف الفتحة باختلاف الجزء البارز من القولون على سطح الجلد:

1. **فتحة القولون الصاعد:** تكون في الجهة اليمنى من البطن، وتكون طبيعة البراز الخارج منها على شكل سائل متماسك.



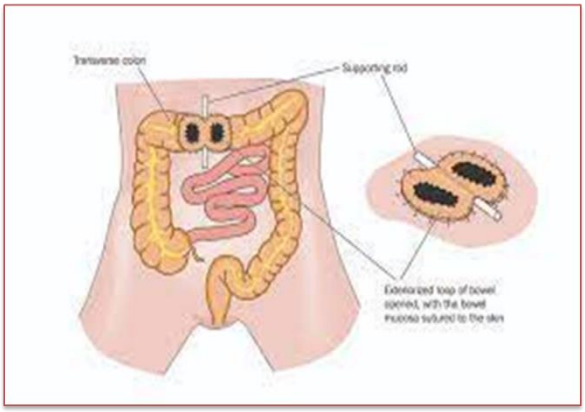
2. **فتحة القولون المستعرض:** تقع في الجزء العلوي من البطن، وتكون طبيعة البراز الخارج منها على شكل سائل متماسك أكثر (شكل العجينة).

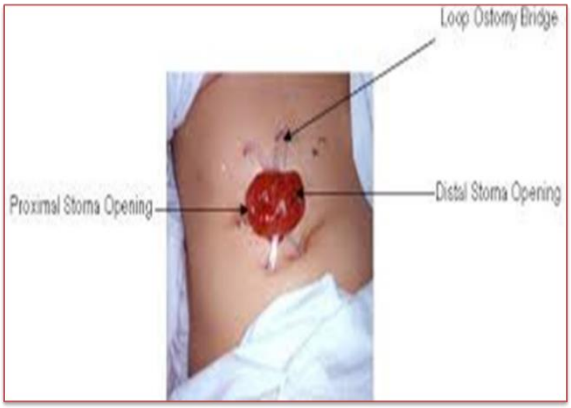


3. **فتحة القولون النازل:** تقع في الجزء الأيسر من البطن، وتكون طبيعة البراز الخارج منها في صورته النهائية المتكونة بشكل كامل، لأنه مر من معظم الجزء السليم في القولون.

. **فتحة القولون الحلقي:**

يتم فيها إخراج جزأين من القولون على سطح الجلد، جزء منه يخرج البراز والجزء الآخر يخرج المخاط الذي تفرزه الأمعاء بالوضع الطبيعي ويثبته الجراح عادة باستخدام عود بلاستيكي صغير.





<u>الشكل الطبيعي لفتحة القولون:</u>

يجب أن تكون وردية محمرة، ناعمة الملمس ورطبة تماماً مثل بطانة الفم. من الطبيعي أن يكون هناك انتفاخ في الفتحة بعد العملية وسيخف تدريجياً خلال فترة الستة أسابيع الأولى بعد العملية.

الارتفاع المثالي للفتحة عن سطح الجلد يجب أن يكون على الأقل 2 انش (5 سم).

حجم الفتحة وشكلها يختلف باختلاف مكانها في الأمعاء.

يجب تغيير كيس الإخراج للفتحة عند امتلائه للثلث بغض النظر عن محتواه سواء كـــان بـــرازاً أو غازات أوغازات فقط أو برازاً فقط لتجنب حدوث تسريب.

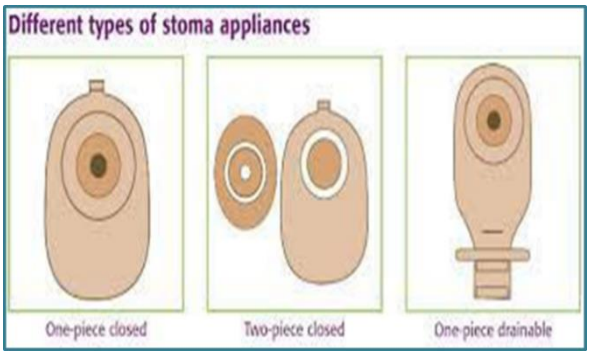
إذا كان لون الفتحة بنياً غامقاً أو أسوداً هذا يشير إلى عدم وصول الدم إليها وبالتالي موت الخلايـــا. في حال لاحظت تغير لونها يجب عليك إبلاغ الطبيب المشرف على حالتك مباشرة.

إذا حدث التدلي وهو عبارة عن بروز الفتحة في الكيس.

إرتاح لمدة 30 دقيقة ،أخبر الطبيب الخاص بك إذا لم تعد الفتحة إلى حجمها الطبيعي بعد تلك الفتـــرة الزمنية، لان استمرار حدوثه يؤدي لإعاقة وصول الدورة الدموية إلى الفتحة.

الأدوات اللازمة للعناية بالفتحة:

كيس الإخراج إما المدمج مع القاعدة أو المكوَن من قطعتين



كريم حامي للجلد المحيط بالفتحة

شاش نظيف

وعاء ماء دافئ

أداة قياس محيط الفتحة

قفازات نظيفة

غطاء قابل لامتصاص الماء

خطوات العناية بالفتحة:

1. قم بتحضير جميع الأدوات اللازمة.

2.غسل اليدين جيداً ثم قم بارتداء القفازات.

3.قم بتحضير القاعدة وقصها بما يتناسب مع حجم الفتحة.

4. يمكن التغييرعلى الفتحة بوضع مريح وأنت مستلقٍ أو في وضعية الجلوس أو الوقوف في الحمام.

Emptying a drainable pouch

6.قم بوضع الغطاء القابل لامتصاص الماء تحت المكان الموجود فيه الفتحة.

7.حافظ على جلد البطن مشدودًا عندما تبدأ بإزالة الجزء العلوي من القاعدة.

8.ادفع الجلد بعيدًا عن القاعدة لإزالة غطاء الكيس برفق ويمكن استخدام البخاخ المزيل.

Spraying Appeel® medical adhesive remover to ease removal of pouch

9. في حال يمكن التخلص من الكيس، ضعه في كيس القمامة. إذا كان قابلاً للاستخدام مرة أخـــرى، اغسله بالماء الفاتر والصابون واتركه يجف في الهواء قبل استخدامه مرة أخرى.

10.قم باستخدام المحارم الورقية لتنظيف الفتحة من البراز. قم بتغطية الفتحة بالشـــاش الطبـــي. قـــم بتنظيف الجلد المحيط بالفتحة باستخدام منشفة ومنظف. يمنع وضع أي مرطبات علـــى الجلـــد فـــي المنطقة المحيطة بالفتحة.

11.قم بتنشيف المنطقة المحيطة بالفتحة جيداً بشكل لطيف، وتأكد من أن الجلد المحيط بها أصبح جافاً بشكل كامل. قم بتقييم حالة الفتحة والجلد المحيط بها. إن التغير في شكل الفتحة، حجمها أو لونها قـــد يعد دليلاً على وجود مشكلة في التروية الدموية الواصلة لها.

12.قم بأخذ قياس محيط الفتحة بالأداة المخصصة لذلك، ثم لمدة قصيرة قم بوضع الشاش على الفتحة حتى تقوم بقص القاعدة. يجب قص القاعدة لكي تكون أكبر من محيط الفتحة بمقدار 2 ميليمتر وبعد القص يجب عمل الحواف ملساء باستخدام الأصابع.

Measuring the stoma aperture

**إذا كانت فتحة قاعدة الكيس أصغر من محيط الفتحة قد يؤدي ذلك لحدوث إصابة (جرح) للفتحة.

**إذا كانت القاعدة أوسع من الفتحة سيؤدي ذلك لحدوث تهيج للجلد المحيط بالفتحة نتيجة تعرضه للبراز.

**وجود أطراف غير متساوية متعرجة في القاعدة ممكن أن يؤدي ذلك لعمل جرح أو ضغط على الفتحة.

13.قم بإزالة الورقة عن القاعدة سريعاً. ثم أزل الشاش عن الفتحة وركِب القاعدة. اضغط بلطف على القاعدة لمدة ثلاثين إلى خمس وأربعين ثانية، الضغط على القاعدة يساعد على التصاقها بشكل جيد بالجلد.

باستخدام المشبك ، قم بطي نهاية الكيس للأعلى حتى يتم إغلاق الجزء السفلي.

الإعتبارات التغذوية:

يجب على المرضى الذين يخضعون لجراحة الفتحة تناول نظام غذائي متوازن يزود الجسم بالسعرات الحرارية والبروتينات والفيتامينات والمعادن وشرب 2–1.5 لتر من الماء يوميًا أي ما يعادل 10– 8اكواب من الماء،لتعزيز الشفاء بعد الجراحة. (Cronin, 2012)

من الأمثلة على مصادر البروتين: اللحوم كلحم البقر، لحم الضأن، الكبدة، لحم الدجاج.

للحصول على المعادن والفايتامينات يمكن تناول الأنواع المختلفة من الخضار والفاكهة كالخيار، البندورة، الفلفل الحلو، الموز، التوت، التفاح وغيرها.

نظرًا لأن الفتحة قد تتورم عند عودة المريض إلى المنزل بعد الجراحة ، فإن اتبـــاع نظـــام غـــذائي منخفض الألياف يسمح للبراز بالمرور بسهولة من خلال الفتحة. بمجرد أن يتم حل التورم ، يُنصـــح المرضى بتناول نظام غذائي متوازن يحتوي على الفواكه والخضروات.

(Schreiber, 2016)

للسيطرة على الإنتفاخ :

- يجب تناول الطعام ببطء ومضغ الطعام جيدًا وتجنب استخدام المصاصـــات، مضـــغ العلكـــة التدخين، تناول الطعام بعد الساعة 7:00 مساءً يمنح هذا أمعائك وقتًا للراحة والإستقرار قبل النوم.
- تجنب تخطي الوجبات.
- تجنب تناول المشروبات باستخدام القشة.
- يعد عدم تحمل اللاكتوز شائعًا أيضًا بعد جراحة البطن ، ويجب تجنـــب منتجـــات الألبـــان إذا اشتكى المرضى من الغازات أو الإنتفاخ أو زيادة حركات الأمعاء أو الإسهال بعد تناول منتجـــات الألبان.

(Cronin, 2012)

- تجنب الأغذية التي تؤدي لحدوث الغازات.

الأغذية التي تؤدي لحدوث غازات:

المشروبات الكحولية والكربونية

العلكة

السمك

البازلاء المجففة والفاصوليا والعدس و مخلل الملفوف

الخيارو الخضراوات من عائلة الزهر والبروكلي

بروكسل ، ملفوف ، قرنبيط ، لفت

البصل و الثوم

الأغذية المبهرة

البطيخ

لتجنب حدوث الإمساك يجب تناول كمية كافية من الألياف مصحوباً باستهلاك كمية كافية من المياه أي ما يعادل8–10 أكواب من الماء يومياً لأن الألياف تمتص الماء لجعل البراز أكثر ليونة.

من الأغذية الغنية بالألياف التي ينصح بتناولها: الخبز والمعكرونة المصنوعة من الحبوب الكاملة والخضار والفاكهة.

يجب زيادة كمية الألياف تدريجيا في الوجبات الغذائية لتجنب حدوث الغازات.

في حال حدوث الإمساك، يحدث تحسن على حالة معظم المرضى عند الإلتزام بتناول كمية كافية من المياه، بالإضافة إلى تناول كميات كافية من الألياف، ولكن في حال لم يحدث تحسن من خلال التغييرات الغذائية وحدها، ففي هذه الحالة يجب مراجعة الطبيب.

الأغذية التي قد تسبب تسكير فتحة القولون:

كرفس، جوز الهند، حبوب ذرة، بذور الخيار، الفاكهة مجففة، قشر الفلفل الأخضر، خَسّ ،الفطر، بذور وقشور الخضار والفواكه والسبانخ.

لتجنب حدوث الإسهال يجب تجنب تناول كميات كبيرة من عصائر الفواكهة والمحليات الصناعية، تجنب التوتر والضغط النفسي.

هناك بعض المضادات الحيوية التي تؤدي لحدوث الإسهال في حال كنت تتناول مضاداً حيوياً يجب التأكد من الطبيب بذلك للتأكد من أن المضاد الحيوي ليس المسبب لحدوث الإسهال.

في حال حدوث الإسهال: يجب تناول الكثيرمن السوائل تعويض الكمية المفقودة من السوائل. في حال كنت تعتقد أن نوع معين من الأغذية قد تتسبب بحدوث الإسهال يجب التوقف عن تناوله. ينصح بتناول الأطعمة التي تحوي على النشويات مثل: البطاطا، الأرز والموز.

إذا استمر الإسهال يجب إبلاغ الطبيب.

لتقليل حدوث الرائحة:

- يبقى الكيس مقاوماً للرائحة إذا تم تغييره حسب التعليمات.
- يجب التأكد من عدم وجود ثقوب في الكيس أو تسريب.
- الحفاظ على نظافة المشبك الذي يغلق به الكيس.
- يمكن استخدام مزيلات الرائحة المخصصة للكيس.
- يمكن تناول بعض الأطعمة التي تساعد على تقليل الرائحة مثل: البقدونس، النعنع، عصير التوت البري.

النشاطات اليومية:

العمل: يمكن للأشخاص العودة للعمل بعد عمل الفتحة، لكن بعد استشارة الطبيب المشرف على الحالة، ويجب تجنب حمل أوزان ثقيلة لمدة 6 أسابيع بعد العملية. خلال فترة العمل يجب الحفاظ على تناول كمية كافية من الماء وتناول الوجبات بشكل منتظم، وأخذ كيس إضافي لتغييره عند الحاجة أثناء ساعات العمل. إذا كنت تعمل في مواقع بناء يجب ارتداء درع واقي لتجنب حدوث إصابة للفتحة.

الحياة الاجتماعية: يمكن الانخراط في الحياة والنشاطات الاجتماعية، دون أن تشكل الفتحة أي عائق للمريض طالما أن الكيس مثبت بالشكل الصحيح، ويمكن للمريض تغييره بنفسه عند الحاجة.

الملابس: ليس هناك حاجة لارتداء ملابس خاصة، يمكن ارتداء الملابس الاعتيادية وحتى الملابس الضيقة لا تؤثر على الفتحة. كما يمكن وضع الكيس تحت الملابس الداخلية إذا كنت لا ترغب بأن يكون ظاهرا.

السفر: لا يشكل وجود فتحة القولون عائقاً أمام السفر، لكن يجب استشارة الطبيب مسبقاً عادة يسمح بالسفر بعد 6-10 أسابيع من الجراحة.

الإستحمام: ماء الإستحمام لا يؤثر على الفتحة، لكن يجب تنشيف الجلد المحيط بها جيدا بعد الاستحمام قبل تركيب القاعدة. كما ويمكنك الإستحمام بوجود الكيس لأنه مضاد للمياه، ويمكن السباحة بوجوده أيضاً لكن يجب تفريغه قبل السباحة.

ممارسة التمارين الرياضية: يجب الحد من النشاطات الرياضية بعد إجراء العملية الجراحية لمدة 6 أسابيع، ويجب إطلاع الطبيب على البرامج الرياضية قبل الإنخراط بها للتأكد من أنها آمنة بجود فتحة القولون، ويفضل البدء بالمشي.

الحياة الجنسية:

لن يؤدي الجماع إلى إتلاف الفتحة ولن تتداخل معظم الأوضاع مع الكيس. الاتصال الجسدي النشاط الجنسي الوثيق أيضاً لا يضربالفتحة.

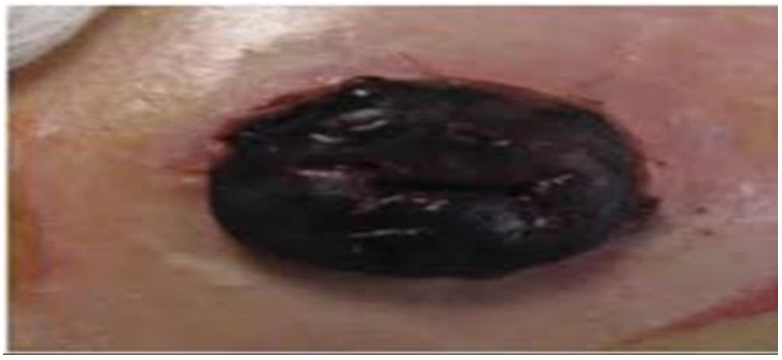
لكن يجب أن يتم اختيار وضعية مريحة ولا تضع وزن على مكان الفتحة . ويمكن تثبيت كيس الفتحة بشريط لاصق أو وشاح أثناء العلاقة.

<u>مضاعفات ممكنة الحدوث لفتحة القولون:</u>

تهيج الجلد المحيط بفتحة القولون

تضيق الفتحة أو تسكيرها قد يكون سبب حدوث ذلك الطعام الذي يحوي بذوراً أو طعاماً غير ممضوغ جيداً.

موت خلايا فتحة القولون نتيجة لعدم وصول دم كافٍ إليها



في حال الحاجة للاستفسار يمكن التواصل مع: عريفة أبو كرش

من خلال الرقم: 0568311690

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ملخص

مقدمة:

فتحة القولون يتم عملها جراحيا لتحل محل الممر المعوي الطبيعي لاخراج البراز، وهناك عدة أسباب لعملها منها: الأمراض الالتهابية التي تصيب الأمعاء الغليظة، الأورام، التشوهات الخلقية، الضربات، التكسير في الأمعاء او تضيقها ونقص التروية الدموية للأمعاء.

هدف الدراسة

تهدف الدراسة إلى فحص فعالية برنامج تعليمي منظم على معرفة المريض وممارسته فيما يتعلق برعاية فتحة القولون في الضفة الغربية.

منهجية الدراسة

تم استخدام تصميم الدراسة شبه التجريبية (الاختبار القبلي والبعدي) لتحقيق أهداف هذه الدراسة. تم اختيار 37 مريضاً بالغاً من الذكور والإناث كعينة ملائمة غير احتمالية لهذه الدراسة والذين أجريت لهم عملية فتحة القولون، والتي اخذت في العيادات الخارجية الجراحية والطبية وعيادات الأورام في المستشفيات الحكومية والخاصة في الضفة الغربية. استخدم استبيان يستخدم لتقييم معرفتهم وممارستهم فيما يتعلق برعاية فغر القولون.

نتائج الدراسة

قبل تطبيق برنامج التعليم المنظم لمرضى فتحة القولون اظهرت النتائج وجود ضعف في المعلومات والتطبيق العملي للعناية بفتحة القولون لدى المرضى.

يوجد فرق ذو دلالة إحصائية بين مجموع درجات المعرفة ومجموع درجات الممارسة للمشاركين بعد تنفيذ برنامج التعليم المنظم.

الخلاصة

تشير نتائج الدراسة الحالية إلى أن التعليم المنظم للمريض هو أداة مفيدة لتحسين فهم المرضى لممارسات رعاية فغر القولون والالتزام بها.

الكلمات المفتاحية: التعليم المنظم ، فتحة القولون، الممارسة، المعرفة