

Patients' perceptions of interdisciplinary educational activities on "Intestinal Ostomy Management" during the perioperative period

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ABSTRACT

Objectives: to analyze patients' perceptions of interdisciplinary educational activities on "Intestinal Ostomy Management" during the perioperative period of intestinal cancer surgeries. **Methods:** a cross-sectional, descriptive study was conducted at a public hospital specialized in cancer treatment in São Paulo, Brazil. Data were collected through telephone interviews, guided by a structured form that assessed patients' perceptions of the guidance offered by the interdisciplinary team on "Intestinal Ostomy Management" during the perioperative period. **Results:** twenty-two patients participated. Most agreed that educational activities in the perioperative period, including preparation in the outpatient setting, preparation/support during hospitalization, and preparation for discharge, were relevant for understanding the surgical procedure, providing emotional support, recognizing postoperative complications, caring of drains and dressings, managing the ostomy and collection equipment, as well as nutritional care for ostomates. The participation of family members/caregivers during educational actions was perceived as important, both pre- and postoperatively, as a facilitator of self-care. **Conclusion:** interdisciplinary educational activities in the perioperative period of intestinal cancer surgeries with resulting stomas are perceived as relevant for understanding treatment and promoting self-care. The participation of family members/caregivers is considered important in this process.

Descriptors: Perioperative Care; Health Education; Surgical Oncology; Patient Care Team.

INTRODUCTION

Preparing patients for intestinal surgeries that result in ostomies is a challenge, particularly in the context of cancer treatment, where patients and their families face multiple demands. These include dealing with uncertainty and the fear of death or loss of a loved one, as well as the need to acquire new skills for self-care. Among the patients experiencing this situation are those with colorectal cancer. In Brazil, 45,630 new cases of this disease were estimated for the period from 2023 to 2025, corresponding to 21,970 cases among men and 23,660 among women⁽¹⁾.

One of the treatment methods for colorectal cancer is oncological surgery, which may be combined with chemotherapy, radiotherapy, or both⁽²⁾.

Within the process of undergoing intestinal oncological surgery, guidance provided by healthcare professionals through interdisciplinary actions plays a vital role. This practice should be valued throughout the perioperative period, including during follow-up after hospital discharge⁽³⁾.

However, it is not enough to simply develop such actions; it is essential to understand how patients and caregivers assimilate this information in order to evaluate and improve the educational process.

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Research that analyzed the perceptions of 97 patients and 19 caregivers regarding the guidance provided in the Enhanced Recovery After Surgery (ERAS) program showed that understanding how participants interpret the educational activities carried out by healthcare professionals (physicians and ostomy care nurses) increases trust and strengthens the bond between professionals and patients, provides emotional support, and empowers patients for self-care, thereby improving postoperative recovery⁽⁴⁾.

Interdisciplinary care during perioperative consultations for colorectal surgery patients has been shown to promote faster surgical recovery and reduce complications, length of hospital stay, and health care costs⁽⁵⁾. Interdisciplinarity involves the interaction and integration of knowledge among the professionals involved, with the goal of achieving the best care strategy for each individual⁽⁶⁾.

Although interdisciplinary educational activities are described in the literature, they are generally reported in the context of the surgical phase rather than within the broader context of the perioperative period. In addition, there are gaps concerning patients' perceptions of the educational activities carried out during the perioperative period of gastrointestinal surgeries with the potential formation of intestinal ostomies.

Therefore, the objective of this study was to analyze patients' perceptions of interdisciplinary educational activities on "Intestinal Ostomy Management" during the perioperative period of intestinal oncological surgeries.

METHODS

This was a cross-sectional, descriptive study conducted from June to August 2022 at a public hospital specializing in the oncological treatment of adult patients, located in the city of São Paulo (São Paulo, Brazil). The hospital is a High-Complexity Oncology Center (CACON, as per its acronym in Portuguese), recognized as a national reference, and part of the health care network of the Brazilian Unified Health System (SUS).

This service includes a perioperative care and support system for both patients and their families, consisting of interdisciplinary educational activities that begin as soon as the physician responsible for the patient indicates the surgical procedure during the outpatient consultation. The care/support system is carried out by the Apt Group (pre-admission), by the interdisciplinary team and intra-hospital reception and assistance (during hospitalization), and by the Teaching to Care Program team (scheduled hospital discharge).

The Apt Group is an educational intervention conducted at the outpatient clinic, with objectives that include clarifying doubts regarding the surgical procedure, facilitating the exchange of experiences between participants (patients and family members), identifying potential risks to the patient, and addressing and meeting their individual needs. The meeting with the interdisciplinary team (nurse, psychologist, and dietitian) takes place only once, before the consultation with the anesthesiologist, lasting one hour, and each professional has 10 minutes to speak, which can be done through

lectures with the aid of audiovisual resources (slides and videos). Participants are grouped according to the type of surgery, and all orientations are recorded in the Health Professional Care Systematization (SAPS, as per its acronym in Portuguese) templates, which are found in the patient's electronic medical record.

The guidance provided by the interdisciplinary team (physicians, nurses, psychologists, physical therapists, social workers, etc.) during inpatient care is intended to reduce anxiety and clarify any questions regarding hospital routines, preparation for surgery, post-surgical recovery, home care, and other related issues. This guidance is provided verbally, at the bedside, individually, maintaining the interdisciplinary care strategy, and recorded in the patients' electronic medical records.

The Teaching to Care Program (PEC, as per its acronym in Portuguese) is an interdisciplinary intervention aimed at family members of hospitalized patients scheduled for discharge, which addresses five different topics: Nasoenteric catheter care; Tracheostomy management; Drain management and other postoperative devices; Fall prevention; Indwelling urinary catheter care; and Intestinal ostomy management. A booklet is provided as support material for teaching and learning.

Family members invited to participate in the educational intervention are preferably those who will be responsible for the patient's care in the household, with no restriction on the number of family members per patient. The objective of this program is to equip family members and caregivers to continue care at home. This intervention takes place a few days before hospital discharge, lasting a maximum of one hour, with an average of 20 minutes of guidance by a professional who uses teaching mannequins and interactive workshops to help assimilate the content.

In this study, patients' perceptions of "Intestinal Ostomy Management" and the guidance provided by nurses, dietitians, and social workers, working in an interdisciplinary manner, were evaluated for specific care related to intestinal ostomies.

The inclusion criteria were: having undergone surgery with intestinal ostomy; having participated in the Apt Group; being able to respond to the questionnaire at the time of data collection; and having family members/caregivers who participated in the Teaching to Care Program between January and December 2019, addressing the topic "Intestinal Ostomy Management." This was the last year before the COVID-19 pandemic. When the survey was conducted, we aimed to include patients who had participated in the most recent edition of the educational initiative. Patients who could not be contacted by telephone were excluded.

To compose the non-probabilistic sample, all patients who underwent surgery for intestinal cancer resulting in ostomy between January and December 2019 were initially listed in an Excel® spreadsheet (2016, Microsoft Corporation, United States). Of the 170 patients listed, 110 had died by the time of data collection, 12 could not be contacted by telephone after four attempts made on different days and at different times, 21 did not participate in the Apt Group, and five patients refused to take part in the study, leaving 22 eligible patients.

The date and time for conducting the survey were scheduled by prior telephone contact. After reading the informed consent form and obtaining verbal confirmation and consent from the participants, data collection was carried out by a nursing resident from the Adult Oncology Care Program, trained to conduct the interview by telephone, using the Iris OmniChannel Cloud Solution® (version 3.0, 2020, Dialtech) online system, which allows the dialogue to be recorded.

During the interview, a structured questionnaire (Appendix 1) was used, containing 53 questions divided into five sections. Participants were instructed to write down the number corresponding to their choice on the Likert scale, based on their perception of the questions presented.

Section I contained five questions addressing the sociodemographic and clinical characteristics of the participants (gender, age, and educational level, among others). The last four sections contained questions to be answered using a five-point Likert scale, where 1 - "I totally agree"; 2 - "I partially agree"; 3 - "I neither agree nor disagree"; 4 - "I partially disagree"; and 5 - "I totally disagree." Section II involved 14 questions that addressed the patient's perception of the intervention performed by the Apt Group (regarding the clarity of the orientations, reduction of anxiety and concern about the surgical procedure, acceptance of the intestinal ostomy, care needs, peristomal care, diet, and training of the family member/caregiver for home care). Section III included 10 questions about understanding preoperative guidance (family visits, recovery and possible complications from surgery, preparation for the procedure, etc.). Section IV, with 19 questions, addressed caregivers' understanding of postoperative care during hospitalization (care of dressings, drains, and intestinal ostomies, management of complications, nutritional aspects, etc.); and Section V contained five questions about the guidance provided by the PEC program to family members/caregivers to assist them (patients) in postoperative care after hospital discharge.

The questionnaire was previously evaluated by two professionals (an oncology nurse and a researcher expert in databases) in order to identify possible inconsistencies that could raise questions among participants. The recommendations were accepted, and the instrument was subsequently applied to three patients, who answered the questions without any difficulty in understanding them. These patients did not make up the sample.

The data obtained through the collection instrument were stored on the Research Electronic Data Capture (REDCap) platform (National Institute of Health, United States) and converted to Excel® spreadsheets for descriptive statistical analysis based on absolute and relative frequency measures.

During the data analysis process, the identification of participants was replaced with the corresponding case number to ensure the confidentiality right established in the National Health Council's determinations (Resolution 466/2012 and its complementary provisions). The research was approved by the Research Ethics Committee, Certificate of Ethical Review (CAAE) No. 57266022.2.0000.0068.

RESULTS

Characterization of participants

The age of the 22 participants ranged from 40 to 82 years, with a median of 68.5 years (mean = 65.5 ± SD 9.9).

Most were male (59.1%) and had incomplete elementary education (36.4%). Rectal tumor topography was the most prevalent (86.4%), and 81.8% had a caregiver, who was most often a child or spouse (Table 1).

Table 1 - Sociodemographic characteristics, tumor topography, type of surgery, and current treatment status of patients (n = 22) who underwent oncological surgery with a resulting intestinal ostomy, São Paulo, São Paulo, Brazil, 2022

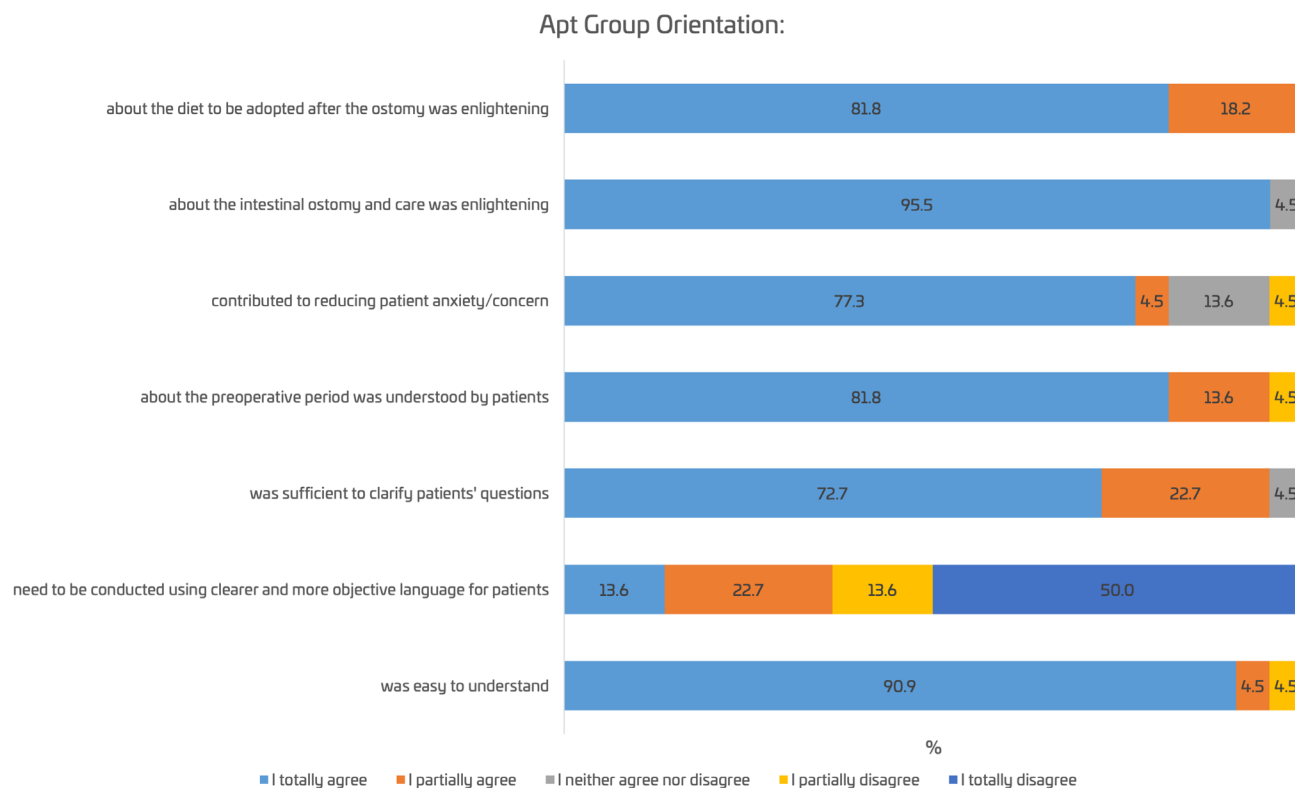
Variable	f	%
Sex		
Male	13	59.1
Female	09	40.9
Level of education		
Incomplete elementary school	8	36.4
Complete elementary school	3	13.6
Incomplete high school	1	4.5
Complete high school	5	22.7
Incomplete higher education	2	9.1
Complete higher education	2	9.1
Graduate degree	1	4.5
Presence of a caregiver		
Yes	18	81.8
No	4	18.2
Caregiver's family relationship		
Spouse	6	27.3
Child	6	27.3
Spouse and child	4	18.2
Spouse and formal caregiver	1	4.5
Sibling	1	4.5
Does not have a caregiver	4	18.2
Tumor type and topography		
Malignant neoplasm of the rectum	19	86.4
Malignant neoplasm of the rectosigmoid junction	1	4.5
Pseudomyxoma of the appendix	1	4.5
Malignant neoplasm of the uterine body	1	4.5
Surgery type		
Rectosigmoidectomy	16	72.7
Abdominoperineal resection of the rectum	4	18.2
Exploratory laparotomy	2	9.1
Current treatment status		
Cancer treatment	2	9.1
Clinical follow-up	20	90.9

Note: *f = absolute frequency

Most participants (90.9%) strongly agreed that the preoperative information presented in the Apt Group was easy to understand. Fifty percent disagreed with the need to improve the

language used by professionals, although 13.6% of participants strongly agreed that professionals should improve the language used during guidance (Figure 1).

Figure 1 - Perception of patients (n = 22) undergoing cancer surgery with intestinal ostomy on the orientations provided by the interdisciplinary team of the Apt Group, São Paulo, São Paulo, Brazil, 2022



Only one participant (4.5%) strongly agreed that there was a lack of information about the surgical procedure, anxiety and emotional management, preparation for hospitalization, recommended diet, and care for intestinal ostomies.

Regarding the participation of family members/caregivers during counseling in the Apt Group, 86.4% (n = 19) of participants strongly agreed that the presence of family members/caregivers was important in helping them during the preoperative period.

Regarding the preoperative period, during hospitalization, 95.5% (n = 21) of patients totally agreed that the participation of family members/caregivers in the educational process, in this context, was important for preparing for surgery.

Most respondents totally agreed that the guidance provided by professionals was easily understood (90.0%) and sufficient to clarify doubts (86.4%), although 36.3% indicated that the language used by professionals during guidance needed to be improved (Figure 2).

Regarding the understanding of the orientations provided by professionals for preparing patients for hospital discharge (Figure 3), most participants agreed completely that the instructions were easy to understand (95.5%) and sufficient to clarify any doubts (95.5%).

The main topics that were clarified and understood during the

guidance provided for hospital discharge were: postoperative care, possible complications of surgery, medical prescriptions, nutritional care, how the "Hello Nurse" channel works, and family participation in assisting with home care.

After surgery, upon hospital discharge, 31.8% (n = 7) of patients used drains, 100.0% (n = 22) used collection devices for colostomy or ileostomy, and 18.2% (n = 4) needed dressings at home.

Regarding interprofessional orientations on postoperative care, 100.0% of participants strongly agreed that they were important in relation to dressing changes at home; 95.5% (n = 21) responded that they totally agreed that the orientations contributed to home care, and 85.7% (n = 7) of those who went home with drains also totally agreed that the information was important for managing this device at home.

Regarding the guidelines for hospital discharge (Figure 3), 90.9% (n = 20) totally agreed that the participation of family members/caregivers was essential for performing postoperative care at home, and 95.5% (n = 21) totally agreed that the orientations were important for the patient and family members/caregivers to perform care after surgery.

Figure 2 - Perception of patients (n = 22) undergoing intestinal cancer surgery regarding interdisciplinary orientation during hospitalization in the preoperative period, São Paulo, São Paulo, Brazil, 2022

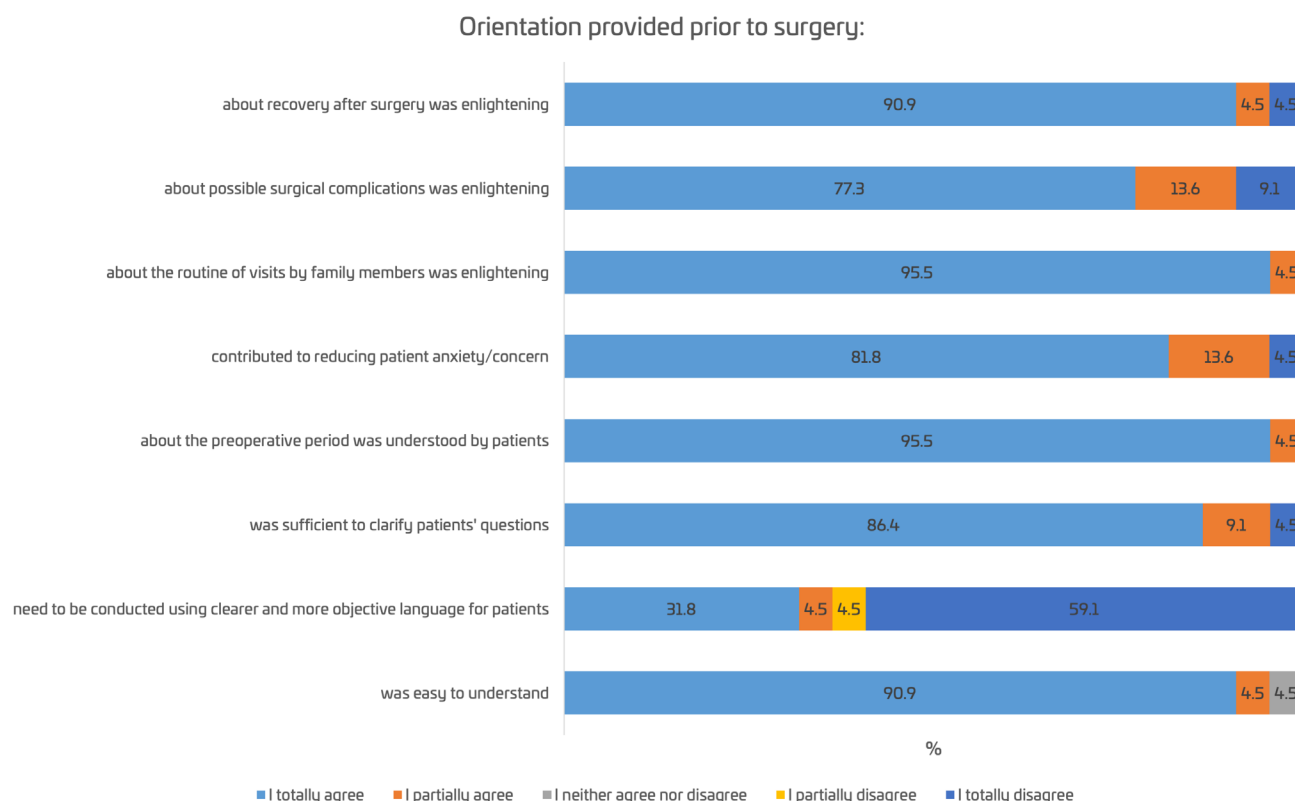
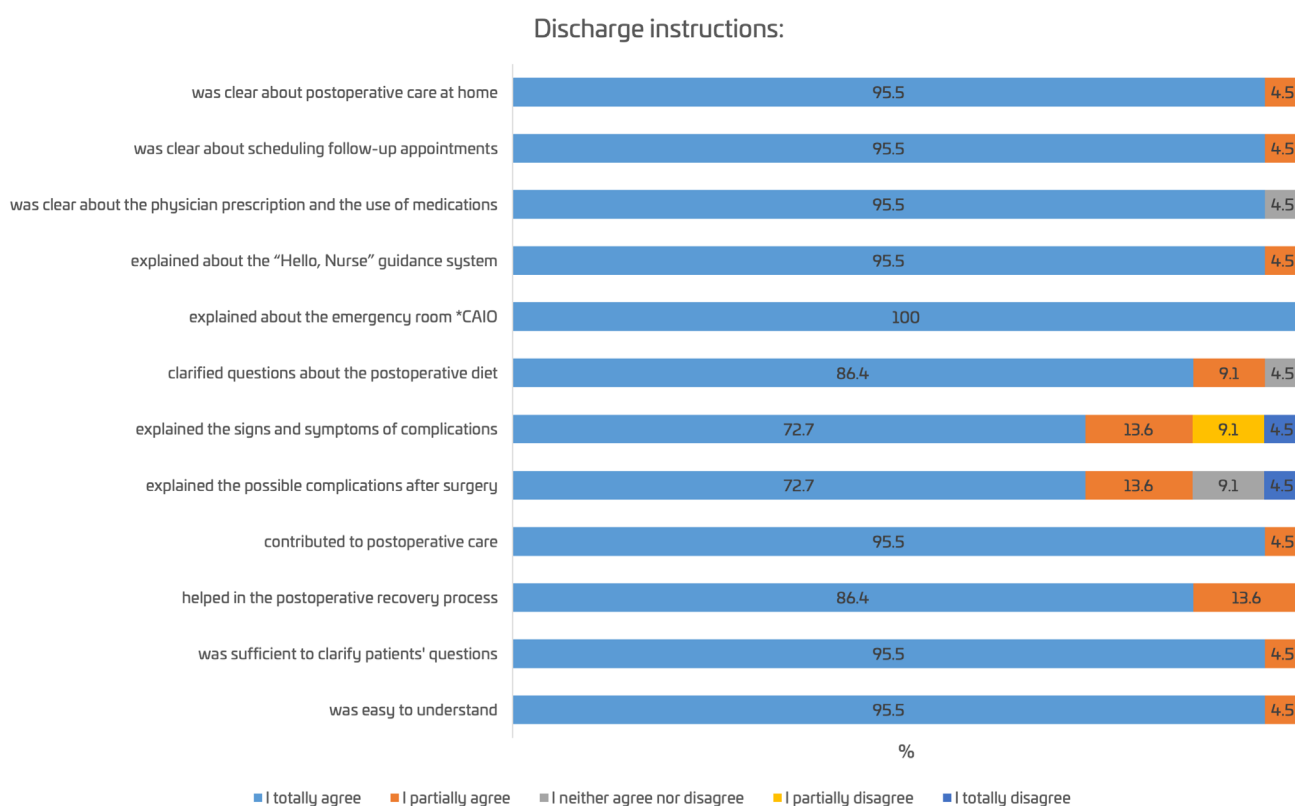


Figure 3 - Perception of patients (n = 22) undergoing intestinal cancer surgery regarding interdisciplinary orientations for hospital discharge, São Paulo, São Paulo, Brazil, 2022

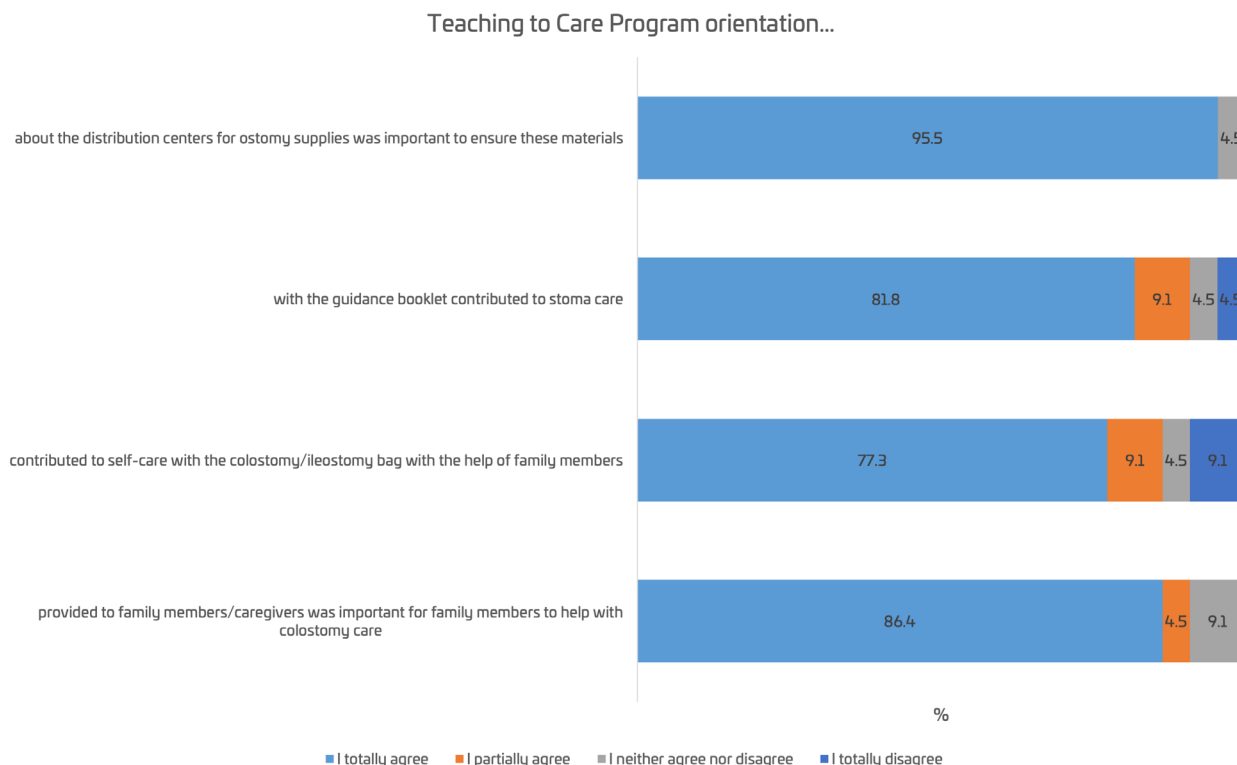


Note: *CAIO – Oncology Complication Care Center (CAIO – as per its acronym in Portuguese – Centro de Atendimento a Intercorrências Oncológicas)

Regarding the participation of family members/caregivers in the Teaching to Care Program (Figure 4), most patients strongly agreed that the guidance provided to family members/caregivers in this program was of great importance, as it helped family members

to assist in colostomy care (86.4%), facilitated self-care with the colostomy/ileostomy bag with the help of family members (77.3%), provided a booklet with guidance on stoma care (81.8%), as well as on the distribution centers for ostomy care supplies (95.5%).

Figure 4 - Perception of patients (n = 22) undergoing intestinal cancer surgery on the impact of the orientations provided by the Teaching to Care Program (PEC*) on the participation of family members/caregivers in the care provided to patients in the postoperative period of intestinal cancer surgeries, São Paulo, São Paulo, Brazil, 2022



Note: *PEC, as per its acronym in Portuguese Programa Ensinando a Cuidar

DISCUSSION

Although most participants in this study are male (59.1%), estimates point to a higher risk of colorectal cancer for the female population, with 21.41 new cases per 100,000 women compared to 20.78 new cases per 100,000 men for the period from 2023 to 2025⁽¹⁾.

Level of education is not a determining factor for colorectal cancer, but this study found that most patients had not completed elementary school (36.4%). A study conducted in Mato Grosso do Sul (Brazil) showed that 36.17% had completed elementary school, 46.81% of patients were retired, with a monthly family income of less than 1 minimum wage (57.45%)⁽⁷⁾.

This profile can be attributed to the setting in which the investigations were conducted, namely, public health institutions. Another possibility to consider is the fragmentation of access to primary health care and prevention strategies. The lower density of Family Health Strategy teams may lead to a more advanced stage of colorectal cancer diagnosis due to the lack of actions for prevention and early diagnosis⁽⁸⁾.

This phenomenon should be taken into account by healthcare

institutions and professionals when planning educational activities and the overall preparation of patients and their families.

The caregiver's contribution to promoting and maintaining self-care in patients with ostomy is, for the most part, effective and present in daily care⁽⁹⁾. In the present study, 81.8% of patients reported that they had family members/caregivers assisting them in developing self-care. These results differ from those of another study that found low caregiver support in monitoring complications and providing care to prevent such complications⁽⁹⁾. Considering this fact, it is worth emphasizing the importance of caregiver participation in the perioperative educational process, with the aim of preparing them to support the patient in performing essential care, preventing complications, and detecting signs and symptoms.

The creation of a stoma (colostomy or ileostomy) for intestinal elimination consists of the externalization of an intestinal loop through the abdominal wall, which can be a temporary or permanent diversion of the intestine. This procedure requires the patient to engage in self-care and adaptive processes, especially in the immediate and intermediate postoperative phases. Therefore, the patient

will require care and guidance for maintaining the stoma, as well as for preventing complications during the perioperative period⁽¹⁰⁾.

This study found that patients had a high level of understanding of the guidance provided by the Apt Group in the period prior to hospitalization (95.4%), in the preoperative period (95.4%), during hospitalization, and in the postoperative period (95.0%), as well as a perception of their sufficiency in clarifying doubts, with 95.4% in relation to the Apt Group and 95.5% in the preoperative period, reinforcing the important role of health education.

The guidance provided prior to hospitalization, as well as that provided during the pre- and post-operative periods (immediate and intermediate), should be valued, as it prepares patients and family members/caregivers to cope with the emotional and physical impacts of colorectal resection surgery with a resulting stoma⁽¹¹⁾.

Effective communication between patients and healthcare professionals is essential for successful treatment, as it enhances the quality of care and mitigates the negative consequences of ineffective communication⁽¹²⁾. To achieve this, it is necessary to understand the barriers that prevent or reduce understanding⁽¹²⁾. Possible barriers to communication include inappropriate language, lack of dialogue, interruptions in communication, lack of interest on the part of the recipient, work and information overload, as well as technical problems related to the resources used for communication⁽¹³⁾.

Although this study found a high percentage of patients who understood the guidelines, a portion of the participants considered that the language used by the professionals during the guidelines provided by the Apt Group (36.3%), as well as by the professionals who assisted the patients in the preoperative period (36.3%), needed to be improved, showing that even if the patient reports understanding, there may still be difficulties in relation to some statements, which were clarified during the discussion of questions.

It is essential to tailor information to the patient and identify learning needs by planning health education interventions, listing communication barriers for possible adjustments in the health teaching-learning process⁽¹²⁾.

Although the vast majority of participants agreed that the guidance provided at the three different stages (pre-admission, pre-operative during hospitalization, and preparation for discharge) was satisfactory, a small number mentioned that there was a lack of information about stomas in the educational activities developed by the Apt Group, which is to be expected, as this was the first team to address the subject, requiring time for participants to assimilate the content.

Information provided to cancer patients in the preoperative period results in reduced anxiety levels and improved control of hemodynamic parameters⁽¹⁴⁾. It is necessary to address the main aspects related to the care of the intestinal ostomy, such as hygiene and peristomal skin care, changing the collection device, recognizing and preventing complications, and eating habits⁽¹⁵⁾, in order to minimize the emotional distress of patients who are indicated for ostomy.

Recognizing the psychological suffering and the social and family context in which these patients find themselves is essential

to identifying the needs of the individual with ostomy and planning interdisciplinary care to meet all of their needs⁽¹⁶⁾.

The procedure to create an intestinal ostomy causes multiple changes in patients' daily life. The process of adapting to the ostomy and its management can be difficult, especially for patients who do not have an adequate support network⁽¹⁷⁾.

Questions related to the procedure and surgical preparation were addressed during the three guidance sessions (pre-admission, preoperative, and preparation for hospital discharge), but a small proportion of the participants in this study mentioned dissatisfaction with the guidance provided by the Apt Group (4.5%) and preoperative admission (4.5%). It is possible that patients were unable to identify the perioperative educational activities, depending on the method and location in which they were carried out⁽¹⁷⁾.

Guidance provided by the healthcare team can enhance an individual's participation in the surgical recovery process and postoperative self-care, which in turn favors improved treatment outcomes⁽¹⁸⁾.

Interdisciplinary guidance during the perioperative period is essential for promoting self-care and preventing complications⁽¹⁸⁾. The most common complications related to intestinal ostomies are peristomal dermatitis, stoma prolapse, stoma mucosal necrosis, and paracolostomichernia⁽¹⁹⁾.

Regarding dietary guidelines for recovery after surgery, in this study, most patients reported that they had their doubts clarified about changes in their eating routine due to the stoma. Among the changes listed by ostomy patients, those that had the greatest impact on their lives were: replacing foods that accelerate intestinal transit, weight gain, and weight loss⁽²⁰⁾.

In order to minimize this impact and improve the quality of life of ostomy patients, nutritional monitoring is necessary to clarify questions about eating habits, contributing to a balanced diet that prevents changes in body weight, malnutrition, nutritional deficiencies, diarrhea, and constipation⁽²⁰⁾.

Another important aspect that contributes to self-care with colostomy/ileostomy is family support in the initial period after the formation of the intestinal ostomy, a situation highlighted in this study, as it was fundamental for the rehabilitation of most of the patients interviewed. The support of caregivers in the care of ostomy patients was also highlighted in another study that compared patients who had caregivers with those who did not⁽²¹⁾.

However, a small portion of the participants in this study agree that the presence of a family member or caregiver is irrelevant to care. This divergence may have occurred due to the heterogeneity of the interviewed group in terms of age, clinical condition, and degree of care dependency.

Advanced age can be a hindrance to self-care due to the inherent limitations of aging. In addition, the clinical conditions presented by patients with oncological diseases may require greater family support for the development of stoma care⁽⁸⁾.

The use of teaching materials can contribute to the effective assimilation of the content taught, as observed in this study. The educational booklet provided by the Teaching to Care Program was

a valuable resource for caring for the ostomy. Educational resources, such as booklets and teleconsultations, provide guidance for the adaptation and self-care of patients with stomas⁽²²⁾.

Most participants in this study totally agreed that the information provided to family members about the distribution centers for ostomy supplies was important for acquiring the necessary supplies for intestinal ostomy care. Patients with intestinal stomas often lack knowledge about their rights and the necessary supplies for self-care, highlighting the importance of providing guidance on this subject⁽²³⁾.

National Policy No. 400, dated November 16, 2009, establishes the National Guidelines for Health Care for Ostomates within the Brazilian Unified Health System (SUS), which proposes assistance to ostomates at all levels of health care, ensuring them the necessary resources for stoma care⁽²⁴⁾.

This study identified patients' perceptions of the guidance provided by the interdisciplinary team to cancer patients undergoing colorectal surgery. The protocol established in the context of this investigation achieved high satisfaction rates, but was not tested in relation to clinical indicators, such as healing time and postoperative complications related to nutrition and pouch management.

It is necessary to develop clinical trials that can test different interdisciplinary protocols for preparing patients for intestinal surgeries resulting in an intestinal ostomy, as well as studies replicating the protocol studied in other settings.

Sample size was considered a limitation of the study; however, given the characteristics of the target population and the inclusion criteria, every effort was made to reach as many participants as possible. Furthermore, the technique of data collection by telephone may lead to inaccuracy in the response options, although participants were asked to write down the response options and consult them before answering the questions.

CONCLUSION

The educational activities carried out in the perioperative period by the Apt Group and the interdisciplinary team during hospitalization, in preparation for hospital discharge, and in the Teaching to Care Program were perceived positively by patients.

The orientations were perceived as important in preparing for the surgical procedure, providing emotional support, recognizing complications, caring for drains and dressings, managing the stoma and collection bag, as well as nutritional care for ostomates. Weaknesses are related to the language used by professionals. The participation of family members/caregivers during educational activities was important, both preoperatively and postoperatively, in addition to helping with self-care, according to the patient's perspective.

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Author contributions - CRediT

AMS: conceptualization; data curation; formal analysis; funding acquisition; methodology; project administration; resources; supervision; validation; visualization; writing – original draft and writing – review & editing.

EAS: conceptualization; funding acquisition; methodology; project administration; resources; writing – original draft and writing – review & editing.

SCL: conceptualization; data curation; formal analysis; funding acquisition; investigation; methodology; resources; visualização; writing – original draft and writing – review & editing.

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None.

APPENDIX 1 - Data collection form - Patients' perceptions of perioperative educational activities**Section I**

1. What is your date of birth? ____/____/____
2. What is your gender? () M () F
3. What is your highest level of education?
 - () Illiterate (Never attended school)
 - () Incomplete elementary school (Attended school up to 5th grade/primary school)
 - () Complete elementary school (Studied up to 9th grade)
 - () Incomplete high school (Did not finish high school)
 - () Complete high school (Finished high school)
 - () Incomplete higher education
 - () Complete higher education
 - () Postgraduate
4. Do you have a caregiver or family member who helps you with daily care?
 - () Yes () No
5. If yes, who are they? (Select more than one, if applicable)
 - () Spouse; () Child; () Friend; () Caregiver; () Sibling; () Parent () Other: _____

Section II

Perceptions of educational activities in the perioperative period
Context of outpatient care - Apt Group

Considering the activities carried out in the Apt Group, indicate how much you agree or disagree with the statements below, considering the following options:

1 - I totally agree; 2 - I partially agree; 3 - I neither agree nor disagree; 4 - I partially disagree; and 5 - I totally disagree.

Item	Statements	Level of agreement				
		1	2	3	4	5
1.	The information you received from the Apt Group was easy to understand.					
2.	The guidance provided by the Apt Group professionals helped you prepare for your surgery.					
3.	The information you received from the Apt Group professionals was sufficient to answer your questions before you were admitted for surgery.					
4.	The Apt Group was important in reducing your anxiety/concerns before the surgery.					
5.	In the Apt group, you received guidance on the possibility of an intestinal ostomy (colostomy/ileostomy) in the surgery you underwent.					
6.	In the Apt Group, you were able to ask questions about what an intestinal ostomy (colostomy/ileostomy) was.					
7.	In the Apt Group, you had the opportunity to ask questions about nutrition.					
8.	The participation of your family member/caregiver in the Apt Group was important in helping you prepare for surgery.					
9.	The professionals at the Apt Group could improve the language they use to guide patients about surgeries.					
10.	The Apt Group lacked information about what the surgery you underwent would be like.					
11.	The Apt Group lacked information on how to reduce anxiety/concerns before surgery.					
12.	The Apt Group lacked information on intestinal ostomies (colostomy/ileostomy).					
13.	The Apt Group lacked information on how to prepare for the day of admission.					
14.	The Apt Group lacked information on your diet after surgery.					

Section III
Perceptions of educational activities in the perioperative period
Context of hospitalization – before surgery

Indicate how much you agree or disagree with the statements below, considering the following options:

1 - I totally agree; 2 - I partially agree; 3 - I neither agree nor disagree; 4 - I partially disagree; and 5 - I totally disagree.

Item	Statements	Level of agreement				
		1	2	3	4	5
1.	The information you received during your hospital stay, prior to your surgery, was easy to understand.					
2.	The guidance provided by ICESP ^A professionals during your hospital stay, prior to your surgery, helped you understand the process of preparing for the procedure.					
3.	The information you received from ICESP ^A professionals during your hospital stay, prior to your surgery, was sufficient to answer your questions.					
4.	The guidance provided by ICESP ^A professionals during your hospital stay, prior to surgery, was important in reducing your anxiety/concern.					
5.	The participation of your family member/caregiver during the guidance provided during your hospital stay, prior to surgery, was important in helping you prepare for surgery.					
6.	Hospitalization professionals need to improve the language they use to guide patients about surgeries.					
7.	During hospitalization, before surgery, you were able to ask questions about preparing for the surgical procedure.					
8.	During hospitalization, before surgery, you were able to ask questions about your family's visiting routine.					
9.	During admission, before surgery, you were able to ask questions about possible complications from the surgery.					
10.	During admission, before surgery, you were able to ask questions about the recovery process after surgery.					

Note: ^AICESP - Cancer Institute of the State of São Paulo

Section IV
Perceptions of educational activities in the postoperative period
Context of hospitalization – hospital discharge

1. When you were discharged from the hospital, did you need to go home with any of the devices listed below?

() Drains () Ileostomy/colostomy bag

2. Did you need to change any dressings at home after the surgery?

() Yes () No

For each statement, indicate how much you agree or disagree with the statements below, considering the following options:

1 - I totally agree; 2 - I partially agree; 3 - I neither agree nor disagree; 4 - I partially disagree; and 5 - I totally disagree.

Item	Statements	Level of agreement				
		1	2	3	4	5
3.	The information you received on the day of your discharge was easy to understand.					
4.	The guidance provided by ICESP ^A professionals on the day of your discharge helped you understand how to take care of yourself at home.					
5.	The guidance you received from ICESP ^A professionals on the day of your discharge was sufficient to answer your questions about the care you should take at home after surgery.					
6.	The guidance provided by ICESP ^A professionals on the day of your discharge was important for you and your family member/caregiver to be able to provide care at home after your surgery.					
7.	The guidance provided by ICESP ^A professionals on the day of discharge was important in answering your questions about the post-surgical recovery process.					
8.	The guidance provided by ICESP ^A professionals on the day of discharge was important in answering your questions about post-operative care at home.					
9.	The guidance provided by ICESP ^A professionals on the day of your discharge contributed to your understanding of possible complications after surgery.					

Item	Statements	Level of agreement				
		1	2	3	4	5
10.	The guidance provided by ICESP ^A professionals on the day of your discharge contributed to your understanding of the signs and symptoms related to surgical complications.					
11.	The guidance provided by ICESP ^A professionals on the day of your discharge helped you understand the importance of going to the emergency room (CAIO ^B) in case of any complications from the surgery.					
12.	The guidance provided on the day of your discharge helped you to change your dressing at home.					
13.	The guidance provided on the day of your discharge helped you to change your colostomy/ileostomy bag at home.					
14.	The guidance provided on the day of your discharge helped you to manage the drain at home.					
15.	The guidance provided on the day of your discharge helped you understand the "Hello Nurse" service, so that you could call if you had any questions.					
16.	The guidance provided on the day of your discharge helped you to take the medications prescribed by your physician correctly.					
17.	The guidance provided on the day of your discharge helped you to clarify any doubts you had about your diet during your recovery after surgery.					
18.	The guidance you received on the day of your discharge helped you clarify any questions you had about scheduling follow-up appointments.					
19.	The participation of your family member/caregiver during the guidance provided during your hospitalization and on the day of your discharge was important in helping you take care of yourself at home.					

Note: AICESP - Cancer Institute of the State of São Paulo; BCAIO - Center for Care of Oncological Complications

Section V

Teaching to Care Program

For each statement, indicate how much you agree or disagree with the statements below, considering the following options:

1 - I totally agree; 2 - I partially agree; 3 - I neither agree nor disagree; 4 - I partially disagree; and 5 - I totally disagree.

Item	Statements	Level of agreement				
		1	2	3	4	5
1	The participation of your family member/caregiver in the Teaching to Care Program was important in helping you learn how to change your colostomy/ileostomy bag.					
2	Your family member/caregiver helped you learn how to care for your colostomy/ileostomy bag.					
3	You are now able to change your colostomy/ileostomy bag on your own because you had help from your family member/caregiver.					
4	The booklet your family member/caregiver received in the Teaching to Care Program helped them care for the colostomy/ileostomy bag at home.					
5	The information your family member/caregiver received about the distribution centers for ostomy supplies was important for you to be able to purchase these supplies.					