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# Patient Perspectives On Pre-Operative And Post-Operative Care Of Colorectal Cancer: A Systematic Review

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### ABSTRACT

**Background:** Treatment for patients with colorectal cancer often only focuses on medical and clinical aspects. All diagnostic procedures, preoperative care, and post-operative recovery have a significant impact on the patient's quality of life. **Method:** This is a systematic review of a qualitative study published where the aim was to evaluate the perspectives of patients with colorectal cancer on pre-operative and post-operative care. The articles were searched for using the PRISMA approach from within Scopus, Web of Sciences, and PubMed to identify the relevant English publications on colorectal cancer patient's perspectives over the last five years (2019-2023). In total, five studies met the inclusion criteria. **Result:** The results of this review: The sample size used in the research varied between 9-18 respondents. Two studies were located in the Netherlands, the other three studies were located in Norway, Washington, and Denmark. There are five studies that examine patients' experiences and views regarding preoperative care, post-operative recovery, post-operative changes, and the need for post-operative actions. All studies use the respondent's perspective in data collection and use a qualitative design. There are three themes that are the main focus of these five studies, namely: information, coping strategies, and symptoms. **Conclusion:** It can be concluded that patients with colorectal cancer really need detailed information regarding pre-operative preparation for post-operative recovery. Support from people closest to them, such as family, has an impact on the patient's coping strategies in facing the changes that occur after surgery. Patients with a stoma generally have problems with stool, so patients must be taught how to regulate diet, meal times, and activities.

**Keywords:** Cancer, Colorectal, Patient Perspectives

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## INTRODUCTION

Colorectal patients will undergo various procedures from diagnosis to post-surgery. At the diagnosis stage, a very common procedure is a colonoscopy. At the diagnosis stage, colonoscopy is considered the gold standard, it can reduce the death rate from colorectal cancer by 68%. Colonoscopy plays an important role in the overall colorectal cancer screening procedure (Zhao et al., 2023). Surgery is also one of the procedures required for patients with colorectal cancer. The surgical process starting from pre-operative, intra-operative, and post-operative will give rise to different experiences for each patient. Patients can produce an anxious response to surgery, and depression regarding post-operative conditions, especially those related to the presence of a stoma (Kovoor et al., 2023).

Colorectal cancer is one of the most common types of cancer in the world. It is estimated that more than 1.9 million new cases of colorectal cancer occurred in 2020, with approximately 935,000 deaths. Colorectal cancer ranks third in terms of incidence (Sung et al., 2021). Currently, there is a shift in the age trend of colorectal cancer cases which are starting to develop at a younger age. A study in Europe found a significant increase in cases of colorectal cancer before the age of 50 years. The highest increase occurred in the 20–29 year age group at 7.9% per year. Followed by the 30–39 year age group with 3.4% and the 40–49 year age group with an increase of 1.6% (Purnomo et al., 2023). Colorectal cancer is also a major health burden in Indonesia, in 2022 the incidence rate will reach 35,000 cases per year (Susanti et al., 2021).

Treatment for patients with colorectal cancer often only focuses on medical and clinical aspects. All diagnostic procedures, preoperative care, and post-operative recovery have a significant impact on the patient's quality of life. However, often the patient's perspective is not fully understood or taken into account in treatment planning. (Cuijpers et al., 2022). Likewise after surgery. Patients with colorectal cancer find facing this disease very difficult, unpredictable, and tiring. Surgery for colorectal cancer can cause decreased quality of life, as well as decreased daily and physical functioning (van Kooten et al., 2023).

Treatment of patients with colorectal cancer has a very long treatment period. Several studies were used as systematic reviews regarding the experiences of patients with colorectal cancer in dealing with the pre-operative period, post-operative recovery, treatment, and routine post-operative examinations. This can help improve patient care by ensuring that the information provided is appropriate to their needs and providing appropriate support throughout the care process.

## METHOD

The focus of the analysis was on studies that evaluated colorectal cancer patients' perceptions and experiences of their care. This is because it is very important to know the patient's experience to produce quality care without ignoring the patient's needs.

We used four steps to identify and select articles that met the criteria specified in this review (Picture 1). Firstly, we conducted a major search on the chosen databases (Scopus, Web of Sciences and Pubmed) to identify the relevant

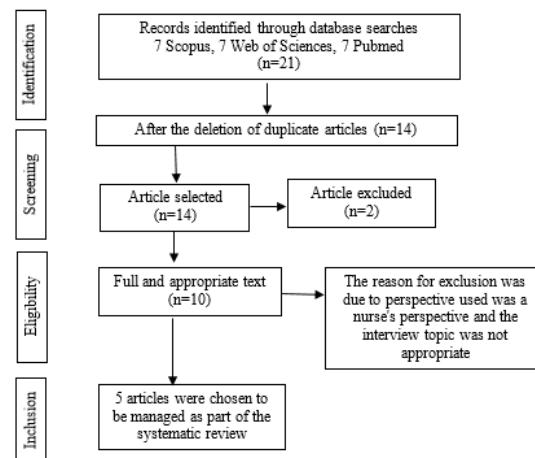
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English works published in the last 5 years (2019-2023). For this review, we used the following search string: (erspective\*) AND (resection OR surgery) AND ("colorectal cancer") AND (qualitative). The search identified a total of 21 articles but the number of articles was reduced to 14 after removing the duplicate results. Secondly, to identify eligible journals, we carefully read each title and abstract of the 14 journals. We focused on the main criteria, namely as the population compiled consisted of colorectal cancer patients. The articles focused on procedure for the colorectal cancer management, and the article reported the perspectives of patients about diagnostic procedure, pre-operation care, post-surgery recovery and treatment after surgery. After this, 10 articles were to be included in the next stage of the review, because the articles had to be sure that they would meet all of the criteria needed.

Third, the remaining 10 articles were read and understood to be considered further for the inclusion criteria. In detail, the journal must not to be a review/report /protocol article, it must exclusively refer to colorectal cancer, it must report at least one result which includes the perspective and experience of colorectal cancer patient about diagnostic procedure, pre-operation care, post-surgery recovery and treatment after surgery. The study should also be from an indexed and reputable journal.



**Picture 1.** Literature search flow

After the third step, 5 articles were eliminated. The reason for exclusion was due to the perspective of the research. They did not report on the use the patient's perspective. It used the nurse or physician perspective. Finally, the remaining 5 journals were considered to be eligible for review and analysis. All of them focused on the perspective and experience of colorectal cancer patient about diagnostic procedure, pre-operation care, post surgery recovery and treatment after surgery.

## RESULTS

The sample size used in the research varied between 9-18 respondents. Two studies were located in the Netherlands, the other three studies were located in Norway, Washington, and Denmark. The complete explanation can be seen in Table 1. There are five studies that examine patients' experiences and views regarding preoperative care, post-operative recovery, post-operative changes, and the need for post-operative actions. All studies use the respondent's perspective in data collection and

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use a qualitative design. The complete explanation can be seen in Table 1.

## Information

Information regarding the presence of metastases, the possibility of receiving an ostomy, and the potential need for additional treatment caused the greatest anxiety and was therefore considered the most important information topic by the majority of patients. Before surgery, most patients expect an average length of stay of 4-5 days. Patients who have been hospitalized, had surgery, or been diagnosed with cancer before know better what to expect, making them feel more prepared. Before surgery, patients focus on surgery, almost without worrying about the postoperative results. Information regarding postoperative morbidity was provided to all patients but a small proportion of patients considered the risk of morbidity an important topic of preoperative information. Many patients prefer to know as little information as possible to avoid further anxiety and because surgery is considered unavoidable. Similar perspectives were observed regarding preoperative recovery expectations during hospitalization and after hospital discharge. Before surgery, patients had a confident and positive outlook on their post-operative recovery, which was expected to take 6-12 weeks. Detailed information regarding in-hospital recovery and recovery after discharge is considered unnecessary and most patients find it too difficult to predict in the preoperative period. Postoperatively, some patients recover without any physical complaints and their recovery corresponds to the preoperative perspective. The patient expressed a desire for a more realistic description of postoperative recovery in the preoperative phase. To improve

the provision of information, patients emphasize the importance of providing continuous information during hospitalization and after discharge, tailored to the individual's treatment and recovery process. (Cuijpers et al., 2022).

**Table 1.** Qualitative studies of colorectal cancer patients perspective as the basis of the systematic review

Author	Participant	The Phenomena of Interest	Context
(Bee et al., 2019)	9 patients colorectal cancer	<ul style="list-style-type: none"> <li>Rapid recovery with minor pain</li> <li>Beneficial recovery versus new techniques for cancer treatment</li> <li>Unmet information needs during hospitalization and after discharge from hospital</li> </ul>	Participants 6 month after laparoscopy due to liver metastase
(Hohl et al., 2020)	13 patients colorectal cancer	<ul style="list-style-type: none"> <li>Barriers to completion of post-operative follow-up colonoscopy</li> <li>Preferences for content and word choice in SMS</li> <li>Preference for response times and cues</li> </ul>	Participants had received colon or rectal resection surgery
(Cuijpers et al., 2022)	18 patients colorectal cancer	<ul style="list-style-type: none"> <li>Organization of preoperative surgical care pathways</li> <li>Provision of information (content and presentation of information)</li> <li>Guidance and treatment</li> <li>Coping</li> <li>Readiness for surgery and recovery</li> </ul>	Patients interviewed three times (preoperatively, 6 weeks and 3 months postoperatively)
(Oggesen et al., 2023)	14 patients colorectal cancer	<ul style="list-style-type: none"> <li>Patient reactions after colorectal cancer treatment (discharge period and coping strategies)</li> <li>Symptoms experienced (stool symptoms and other symptoms)</li> </ul>	Patients with complication after colorectal treatment
(van Kooten et al., 2023)	23 patients colorectal cancer	<ul style="list-style-type: none"> <li>Daily life and activities</li> <li>Psychological functioning</li> <li>Social functioning</li> <li>Sexual functioning</li> <li>Healthcare experiences</li> </ul>	Participants had received colon or rectal tumor resection surgery

The information that patients receive before surgery is sufficient, but they receive little information about how to deal with their illness after leaving the hospital, which makes them feel unsure. Right after surgery, the surgeon talks with the patient about the operation and how it went. Information about the tumor removed is also provided. However, when it came to specific findings regarding tumor cell types, potential outcomes of surgery and information available

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several weeks post-surgery, respondents stated their information needs had not been met (Boe et al., 2019). Patients indicate the need to provide information in a measured and continuous manner after surgery. Some patients also mentioned that the information was often not personalized, making it difficult to determine whether some of the information was necessary for them or not. Some patients want to receive written information, while others prefer digital information portals. Regardless of how the information is provided, visualization is very important for patients. Images, photos, and videos provide a better understanding of the disease and its treatment. Patients who undergo an ostomy feel more prepared after viewing ostomy-related pictures and materials before surgery (Cuijpers et al., 2022).

For follow-up colonoscopies, patients require reminders via SMS. Respondents agreed that SMS content should offer educational messages with supportive directions for scheduling a follow-up colonoscopy. To address the lack of knowledge about screening guidelines and susceptibility to recurrence, respondents suggested that SMS language include facts to inform or remind patients that a 1-year curative resection surveillance colonoscopy may help prevent recurrence. Respondents said it was important that the SMS explain the benefits and next action steps resulting from colonoscopy surveillance. Patients also spent a lot of time discussing the importance of personalizing reminders whenever possible. They recommend that messages include the name of the clinic or service provider and include language indicating that there is an operator who can answer the message when the patient sends a response to the message. The third theme found data that

receiving text messages nine months after resection was appropriate because patients had time to think about diet and other preparations. All patients expressed resistance and lack of motivation to respond to instructions in the messages sent. Some patients indicated that these questions would not yield useful responses because the language used was difficult to understand (Hohl et al., 2020).

## **Coping Strategy**

In the preoperative period, support from those closest to you can build positive feelings so that the patient is ready to undergo surgery (Cuijpers et al., 2022). A study stated that all patients experienced further complications. Before patients come to the clinic for complications screening, patients generally use two coping strategies to manage these symptoms. Some prefer to do nothing, while others turn to the internet for information. Patients who do not use the internet expressed concerns about the amount of information available and the confusion it causes. They find it difficult to determine what is accurate and reliable amidst the abundance of information. Additionally, some patients do not have the energy or capacity to search for symptom information and treatment options on the internet (Oggesen et al., 2023).

## **Symptoms**

Symptoms of complications experienced are symptoms in the stool and other symptoms. The patients in a study reported experiencing diarrhea and fecal incontinence, both during the day and at night. They often experience unexpected bowel movements due to loss of sensation and ability to control stool. They often defecate 3 to 15 times a day, including at night.

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Patients in this study shared the various strategies they employ to control their bowel movements. For example, one patient found that fasting from 6 p.m. to 12 p.m. helped reduce the likelihood of experiencing incontinence at work. Other patients found that cycling further reduced the risk of incontinence. One patient observed that consuming starch as a fiber substitute resulted in a decrease the number of bowel movements. Other complaints or complications experienced by patients are erectile dysfunction, especially in male patients, urinary problems, fatigue, and pain in the legs and pelvis related to radiotherapy. (Oggesen et al., 2023). Respondents also reported some challenges related to sexual function as a consequence of colorectal cancer treatment, while some respondents were no longer sexually active. Erectile dysfunction and inability to ejaculate were reported as the major problems (van Kooten et al., 2023).

## DISCUSSION

Colorectal cancer is defined as cancer of the colon or rectum (Lewandowska et al., 2022). Cancer and treatment side effects often lead to physical decline, poor treatment compliance, and lower quality of life (Lund et al., 2020). Therefore, it is very important to pay attention to the patient's perspective in providing care to provide comfort and reduce physical and psychological complaints.

Patients really need the right information from pre-surgery, to post-surgery, even for post-operative follow-up colonoscopy examinations. In the preoperative phase, respondents received information regarding the action to be carried out through informed

consent and presentation of information from the surgeon who would carry out the information. Some of the information that patients receive is information about things that need to be prepared before resection (Kamer & Çolak, 2020). A lack of information is provided about hospital care and postoperative recovery. These data are by data collected from colorectal cancer patients who had undergone laparoscopy for liver metastases. Patients said they received little information during treatment and after discharge. Patients do not know what to do post-surgery and how long it will take to recover. Even though laparoscopy does not have as major a postoperative effect as laparotomy, patients still have questions about what to do after laparoscopy. In addition, the relatively new laparoscopic technique makes patients feel concerned about the safety of this procedure (Bøe et al., 2019).

After colorectal cancer resection, the patient's experience regarding health care is that he cannot communicate with the surgeon who performed the operation, even at that time the patient was experiencing complications. The communication method preferred by patients is face-to-face. The conditions of the COVID-19 pandemic mean that communication methods are often carried out by telephone, but patients say they are not satisfied when communicating by telephone. Colorectal cancer patients who have completed surgery and chemotherapy or radiotherapy treatment must also undergo a follow-up colonoscopy 1 year after surgery. (Cuijpers et al., 2022). Patients in Washington are getting reminder messages sent via SMS. Patients said that preferences for content and word choice were very important in persuading patients to be willing to undergo further colonoscopy. Patients also hope that there is an

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operator behind the message so they can provide clear instructions when there is something the patient wants to clarify (Hohl et al., 2020).

Another theme that also makes up the majority of the data in these five studies is coping strategies. In the preoperative period, support from those closest to you can build positive feelings so that the patient is ready to undergo surgery (Andersson et al., 2023). Not only pre-operatively, but also post-surgical coping strategies, especially when complications arise, also need to be maintained. Apart from support from those closest to them, patients try to get information about their disease via the internet (Oggesen et al., 2023). The next theme that is widely discussed is the symptoms experienced by post-operative patients. Most complain of changes in digestive and sexual function. Patients with a stoma have a fear of colostomy bag leakage because the stool has a liquid consistency and can come out up to 15 times a day, even at night. The patient also expressed complaints about sexual function. All male respondents reported erectile dysfunction as the main problem. The patient stated that there was not much change in his social function (van Kooten et al., 2023).

## CONCLUSION(S)

Patient perspectives on colorectal cancer treatment programs need to be explored qualitatively to obtain more detailed experiences. The research results show that patients really need detailed information regarding pre-operative preparation for post-operative recovery. Support from people closest to them such as family has an impact on the patient's coping strategies in facing the changes that occur after surgery. Patients with a stoma

generally have problems with stool, so patients must be taught how to regulate diet, meal times, and activities.

## Conflict of Interest

The authors declare no conflict of interest.

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