

The Patient Experience of the Colonoscopy Process: A Review of the Literature

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Background

- Literature review necessary to identify gaps about patient experiences of inadequate bowel preparation.
- Between 8.5 to 44% of patients may experience an outcome of an inadequate-quality bowel preparation, which means that too much stool remains in the colon that cannot be flushed/suctioned.
- Typical colonoscopy preparation includes:
 - At least one day of dietary restrictions: clear liquids only
 - Four liters of laxative
 - Half the night before the colonoscopy
 - Half the the morning of the colonoscopy
- PI's home facility performs approximately 8,262 colonoscopies per year with between 0.9% to 1.09% requiring repeats due to inadequate preparation:
 - Decrease in patient satisfaction
 - Lost revenue
 - Disruption of workflow

Clinical Question

What are the experiences, understandings, and satisfaction of patients during the colonoscopy process?

Methodology

Keywords: Bowel preparation, inadequate bowel preparation, colonoscopy, decision-making, experience, perception, anxiety, colorectal cancer screening, decision-making, health literacy

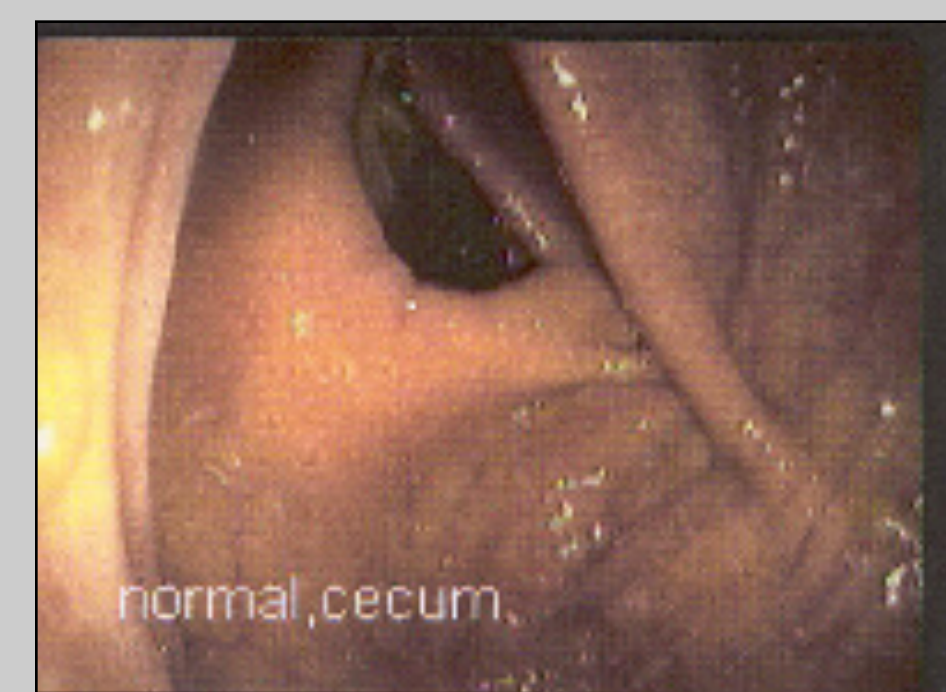
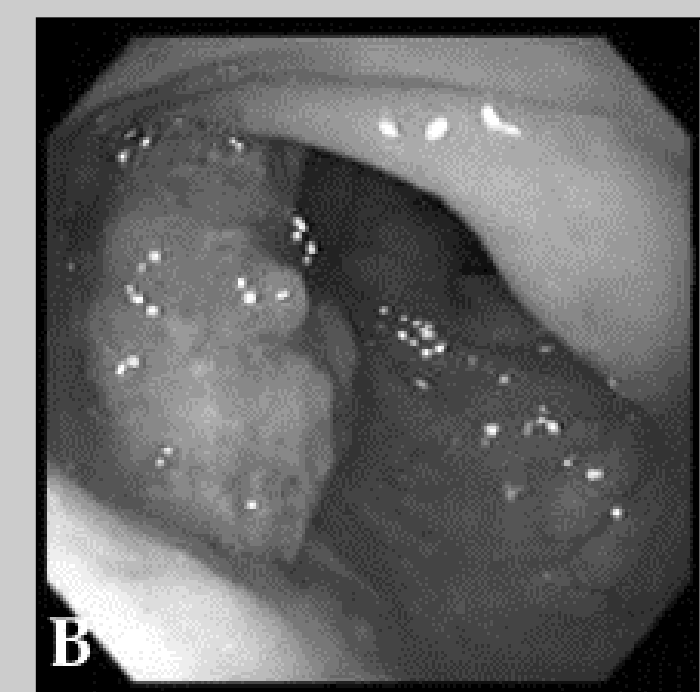
Inclusion criteria:

- English
- Published in the last 6 years
- Adult population 18 years and older

Exclusion criteria:

- Case studies, white papers, advertisements, quality improvement
- Children 17 years old and younger
- Endoscopy procedure other than colonoscopy
- Included other forms of colorectal screening such as fecal blood testing
- Interventional studies

A review of the literature was completed using PubMed, Google Scholar, and CINAHL. 23 articles were found. 17 articles were excluded. Six articles were included. Excluded articles were rejected primarily if research question did not align with purpose of this review or included other forms of CRC screening. Included articles met criteria and explored aspects of patient experience of colonoscopy including understanding, patient satisfaction and tolerance, and general perceptions of the process.

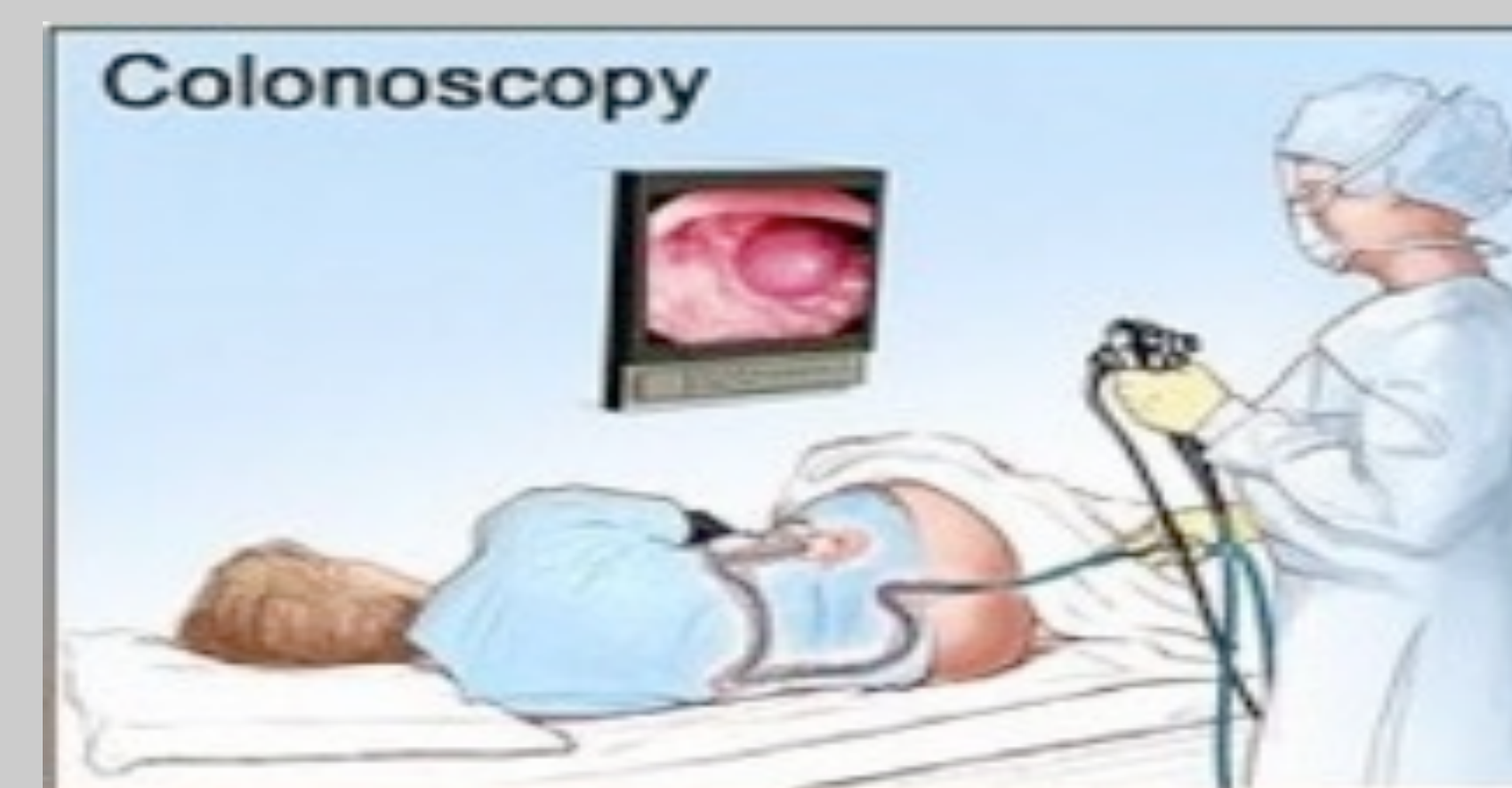


Left to right: multiple polyps, normal colon, single polyp.

Results

Before Colonoscopy

- Bhise et al. (2016) reported that many colonoscopy appointments were missed by patients due to preparation phase challenges and inconvenient procedure time.
- Denters et al. (2013) reported that most participants identified the bowel preparation phase as the most burdensome aspect.
 - Patients with Inflammatory Bowel Disease (IBD): clear explanation of colonoscopy as biggest contributor to satisfaction before colonoscopy.
- King-Marshall (2015): more difficulty in defining colonoscopy if patient was African American, unmarried, younger, had lower income or education levels, had not previously had a colonoscopy, and more information about procedure was not pursued. Incorrect patient responders reported lower levels of confidence in proper preparation, less perceived benefits, and higher perceived risks of procedure.
- Mikocka-Walus et al. (2012): pre-procedure, patient anxiety stemmed from stigma and irrational expectations, e.g. fatal diagnosis, manifested as general feelings of anxiety and fear, related to avoidance of awkward discussion with family and friends, but anxiety was decreased in the presence of a strong, trusting, physician-patient relationship. The bowel preparation was considered to be inconvenient, uncomfortable, annoying, and a significant contributor to anxiety, but was seen as a "necessary evil."
- Shafer et al. (2018): Overall, patient anxiety was highest with younger age (<40 years old) and first-time or diagnostic colonoscopies. Anxiety about preparation was most common in women, and anxiety was lowered across the sample with preparation if the laxative was completed and if instructions were clear. Anxiety about the procedure surrounded anticipated experience and results.
- Ussui et al. (2013) found that men were more likely to be tolerant or willing to have another colonoscopy. Patients younger than 21 years of age and those with colic or nausea/vomiting symptoms reported lower levels of tolerance.



During Colonoscopy

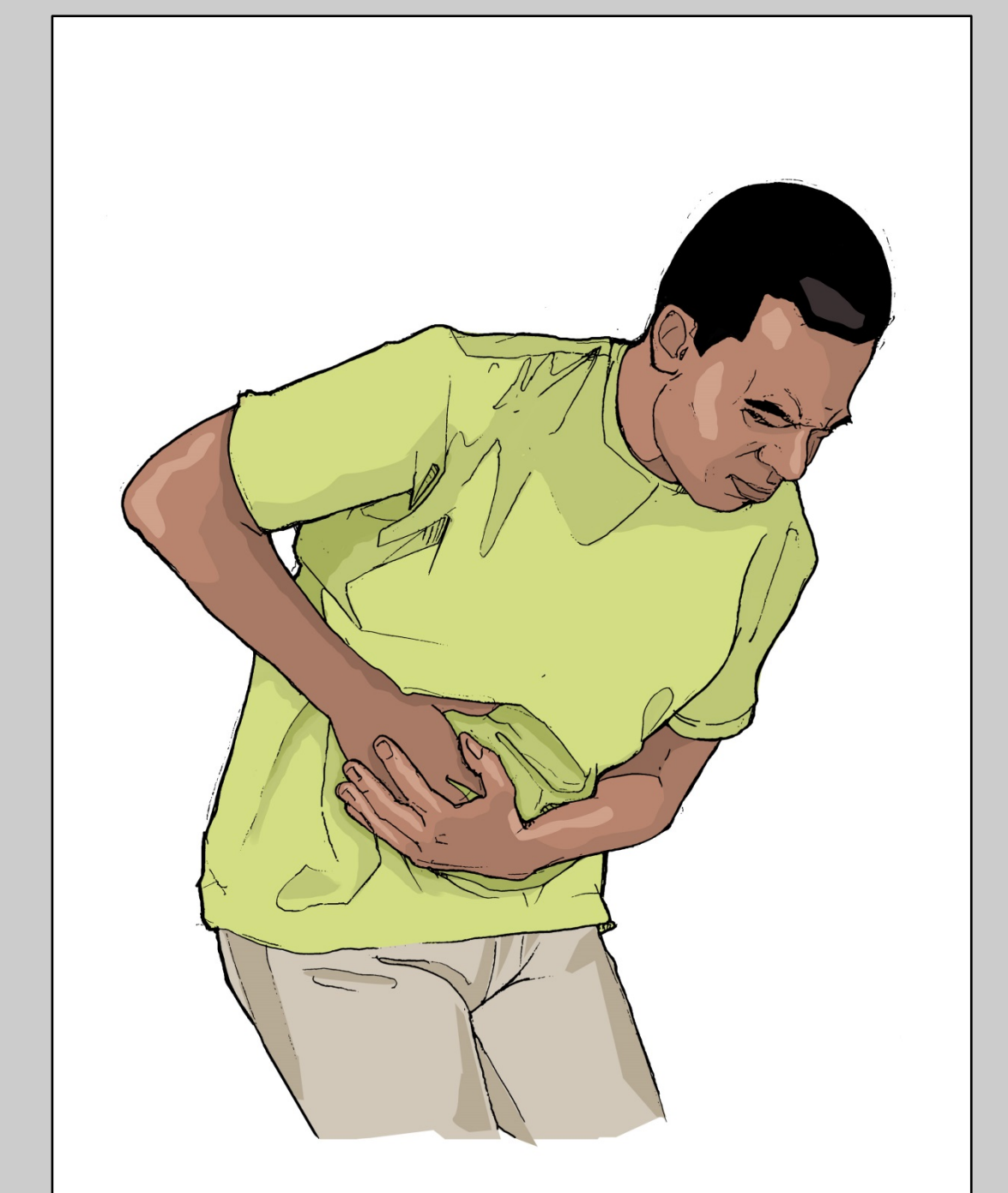
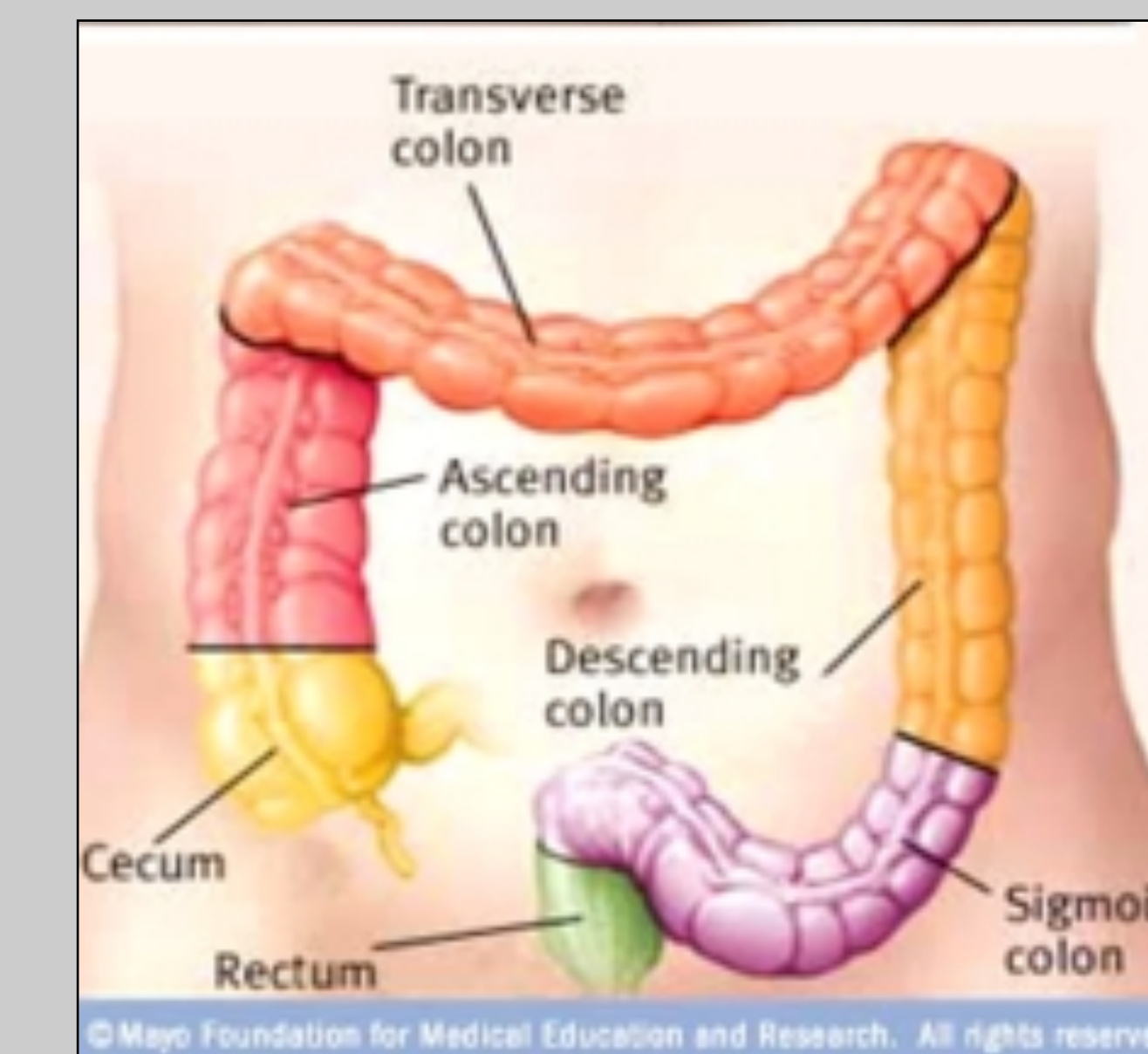
- Denters et al. (2013): procedure-related burden, embarrassment, and pain varied with reason for procedure:
 - Increased pain noted with longer exam times and interventions.
 - Procedure rated as most burdensome for patients with Irritable Bowel Syndrome
 - A trusting relationship with physician as biggest intra-procedure satisfaction factor for patients with IBD.
 - Satisfaction level with sedation amount changed according to indication for procedure: IBS patients were least satisfied with amount of sedation.
 - Participants were more likely to be dissatisfied with higher levels of Midazolam.
- Mikocka-Walus et al. (2012): less patient anxiety with perceived staff professionalism and confidence.
- Ussui et al. (2013): higher levels of reported tolerance from participants that cooperated with the physician. Lower levels of tolerance if pain was experienced during the procedure and if another physician was needed to finish the test.

A reference list is available upon request from the author.

Results

After Colonoscopy

- Denters et al. (2013): (63% of original sample), 6 weeks post-exam, most participants were *less* satisfied with higher levels of embarrassment and burden and lower levels of recounted pain.
- Mikocka-Walus et al. (2012): shift to lower levels of anxiety levels about the procedure after completion, characterizing such anxiety as unrealistic due to ease of procedure phase. All of the participants informed the researchers that they felt some degree of relief and reassurance after the colonoscopy was over and there were no feelings of regret.
- Ussui et al. (2013) shared that participants with higher levels of satisfaction with the physician and general satisfaction with the whole process were more tolerant, as were those that did not have abdominal pain after the procedure was over.



Discussion

Strengths

- The literature provided a multifaceted overview of the patient experience of the colonoscopy process.
- Some of the studies were performed at multiple sites or had a longitudinal design, which enriched the findings and allowed comparison of perceptions over time or across locations.

Weaknesses

- The findings lacked focused perspectives from vulnerable populations.
- Low representation of patient perceptions from United States facilities.
- There was no focus on the colonoscopy experience of participants regarding outcome of bowel quality preparation.

Conclusions

- Dissatisfaction with bowel preparation and importance of trusting relationship with physician were commonly reported features of the patient experience.
- Interestingly, a unique finding was that patient satisfaction decreased one and a half months post-procedure, suggesting extended follow-up may help.
- Colonoscopy is a *process* beyond intubation and retrieval of scope.
- Previous literature on patients with inadequate bowel preparation has primarily focused on interventional methods to reduce outcome but not patient experience.
- A research study was designed to explore the patient experience of the colonoscopy process with outcome of inadequate quality bowel preparation.