

LETTER TO THE EDITOR

Knowledge, attitudes and practices of doctors on constipation management in Singapore

Dear Editor,

Constipation is a common gastrointestinal disorder, affecting about 15% of the global population and severely impacting patients' quality of life.¹ The global constipation treatment market is estimated to worth USD22.93 billion in 2025. Patients with functional constipation had the highest treatment dissatisfaction at 63.4%. Poor satisfaction was reported due to ineffective treatment, adverse side effects of medication, concerns with long-term safety of medication and lack of treatment options.²

Doctors' awareness of standardised guidelines, diagnostic criteria and treatment options can affect their confidence in the diagnosis and management of constipation. However, there is often a lack of adherence to standardised guidelines in primary care, which could impact treatment outcomes and satisfaction.³ As constipation is commonly treated in different settings, it is important to examine potential gaps and variations in constipation management between specialties that could contribute to poor treatment satisfaction. Therefore, the current study aims to investigate the knowledge, attitudes and practices of doctors across specialties regarding constipation management in Singapore.

A cross-sectional survey on doctors' knowledge, attitudes and practices regarding constipation management was conducted using a 49-item online questionnaire that was distributed via snowball sampling to doctors across Singapore over 6 months (July 2021 to December 2021). The questionnaire was designed with input from gastroenterologists and generalists to ensure clinical relevance and appropriateness of survey items for the study's objectives. Responses to knowledge and attitude items were examined using chi-square tests to compare between 4 groups: gastroenterology (GE), family medicine (FM), general medicine (GM) and other specialties. A composite knowledge score was created to assess doctors' overall knowledge about constipation management. Three questionnaire items were used to obtain attitude scores: (1) "Chronic constipation can be easily identified"; (2) "Chronic constipation is very difficult to treat"; and (3) "I know how to diagnose functional constipation confidently." Further analyses were conducted with knowledge and attitude scores using a 1-way analysis of variance (ANOVA) for comparison among GE, GM, FM and other specialties. Significant group effects were analysed post hoc using Tukey's Honestly Significant

Table 1. Demographic data of participants.

Demographic characteristics	Total (n=153)	
	n	%
Specialty		
Gastroenterology	21	13.7
Family Medicine	50	32.7
General Medicine	43	28.1
Other specialties	39	25.5
No. of years in medical practice		
Less than 2 years	16	10.5
3–5 years	66	43.1
6–10 years	34	22.2
More than 10 years	37	24.2
Sex		
Female	83	54.2
Male	70	45.8
Adequacy of training in management of constipation		
Very adequate	17	11.1
Somewhat adequate	106	69.3
Not adequate	18	18.3
It was not taught	2	1.3

Difference (HSD) test. Simple linear regression analysis was performed to investigate the effects of overall knowledge on attitudes, specifically on the identification, treatment and diagnosis of constipation.

We found that only 11.1% reported having very adequate training in management of constipation. This was reflected in the limited knowledge exhibited: only 34% were familiar with Rome IV criteria of functional constipation. While 81.0% of gastroenterologists indicated that it is safe to consume osmotic laxatives in the long term, a proportion of doctors from GM (55.8%), FM (48.0%) and other specialties (71.8%) indicated long-term consumption to be unsafe. Furthermore, a substantial percentage of doctors (GM, 51.2%; FM, 40.0%; GE, 14.3%; other specialties, 30.8%) incorrectly identified lactulose to have better efficacy for the elderly than polyethylene glycol (PEG). Almost all doctors were agreeable that

constipation is a common health problem. It was found that knowledge score significantly predicted attitude score for confidence in diagnosing functional constipation ($\beta = -.203$, $P < 0.001$). For the diagnosis of functional constipation, doctors from GE were significantly more confident than doctors from all other groups ($P < 0.001$). In addition, 61.4% of doctors felt that digital technology can aid chronic constipation management.

The limited knowledge of our doctors, especially FM and GM doctors, is worrying as majority of patients with functional constipation are encountered in generalist settings.⁴ Although osmotic laxatives are commonly used by generalists, it is alarming that almost half of them do not know the long-term safety of osmotic laxatives and that PEG has a better efficacy. A recent Cochrane review reported that PEG was better than lactulose in outcomes of stool frequency per week, form of stool, relief of abdominal pain and the need for additional product use.⁵

More than half of the FM and GM doctors were unable to identify the Rome IV criteria, possibly due to a lack of usage of Rome IV diagnostic criteria in non-specialist practice.⁶ Limited knowledge could be due to our doctors' unfamiliarity with constipation guidelines. A study in Canada showed that despite 69% of respondents being aware of the guideline, only half found the guideline helpful and most wanted a more applicable local treatment algorithm.⁷ Recently, we have also seen regional or national guidelines on chronic constipation, including an Asian-based constipation guideline for primary care physicians developed by the Asian Neurogastroenterology Motility Association.⁴ It is critical for doctors to stay updated with novel guidelines relevant to various cultural contexts, in order for patients to receive appropriate treatment.

Many studies have reported that patients with constipation are dissatisfied with their treatment and the gap between doctors' knowledge and practice could be a contributing factor.^{2,8} Only 28.1% of doctors were confident in diagnosing functional constipation, and 66.7% reported that constipation was very difficult to treat. One of the keys to improving patient satisfaction lies in accurate diagnosis, as we may be underdiagnosing defecation disorder (DD) in which laxative is ineffective. The prevalence of DD among patients with chronic constipation (CC) ranges from 27% to 59% in the West, and about 40% in Asia.⁹ Given the high prevalence and ineffectiveness of laxatives for DD, it is important to diagnose patients with DD.

In the past decade, the US Food and Drug Administration (FDA) approved several new

treatment options that are more effective than lifestyle changes and over-the-counter drugs.¹⁰ With the use of digital technology that was positively received by most doctors, they can access updated guidelines on new FDA approved drugs, including safety profiles and usage recommendations.

One limitation of our study is self-reporting bias. Conducting a clinical audit could be explored to assess the actual practice. We also acknowledge that a lower response rate than the expected sample size of 374 limits the generalisability of our results.

Our study showed that most doctors can appreciate the prevalence and burden of constipation. However, it is surprising to reveal issues facing constipation management from limited familiarity with guidelines to significant knowledge deficit in the management of constipation. Future research should investigate how interdisciplinary collaboration through digital technology may assist CC education and management.

Keywords: *family medicine, gastroenterology, internal medicine, medical education, epidemiology*

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