Colorectal cancer – applying a gender lens

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ABSTRACT

Background Colorectal cancer (CRC) is a major global health problem with survival varying according to stage at diagnosis. The incidence of CRC is much higher in patients with lower bowel symptoms. The symptoms are non-specific and are commonly experienced in the general population. Biological and environmental factors account for the high incidence and poor prognosis of CRC in men.

Objective To review the behavioural factors influencing patient delay in seeking help for lower bowel symptoms using a gender lens.

Methods An extensive literature search was performed using various databases including Medline, PubMed, CINAHL Plus, EMBASE and PsycINFO (1993–2013). Various search terms including rectal bleeding, prevalence, colorectal cancer, consultation, help-seeking, gender differences and men were used. A systematic methodology including systematic data extraction and narrative synthesis was applied.

Results Thirty-two studies were included in the review. All studies except four were quantitative. Although there is some evidence that men delay more compared with women, there has not been any major improvement in the help-seeking behaviour for such symptoms over the past two decades. Several behavioural and demographic factors were associated with low rates of help-seeking.

Conclusion There are limited studies focusing on men’s help-seeking behaviour for lower bowel symptoms. To facilitate timely help-seeking in men, it is important to understand their patterns of help-seeking for such symptoms. Further research to understand men’s help-seeking behaviour is warranted.

Keywords: colorectal cancer, gender, general practice, help-seeking behaviour, primary care, quality improvement

How this fits in with quality in primary care

What do we know? Delays in seeking assessment and treatment for symptoms of colorectal cancer adversely affect prognosis. There are limited studies focusing on men’s help-seeking behaviour for lower bowel symptoms. To facilitate timely help-seeking in men, it is important to understand patterns of help-seeking for such symptoms.

What does the paper add? There are limited studies focusing on men’s help-seeking behaviour for lower bowel symptoms. There is some evidence that men delay more compared with women. A major reason for patient delay was the failure to appraise the symptoms as illness due to lack of adequate knowledge about the risk of colorectal cancer in those with persistent lower bowel symptoms. Several behavioural and demographic factors were associated with lower rates of help-seeking.
Introduction

Men’s health literacy and health service utilisation

Men have lower health literacy and are less knowledgeable than women about specific diseases and risk factors, as well as about health in general. They are also less anxious about health and are more likely to dismiss health symptoms until they become severe or life-threatening. Owing to traditional masculine beliefs, men are less likely to access health information and apply it to improve their health. Women, by contrast, are known to seek advice for their symptoms from general practitioners (GPs) as well as their lay network and are also instrumental in encouraging men to seek medical help. It has been observed that women have more knowledge about the symptoms of colorectal cancer (CRC) and their significance than men.

In Australia, men are less likely to consider their health as poor and seek medical advice. In 2007–2008, it was reported that Australian men younger than 65 years were much less likely to consult their GP than women.

Gender differences in CRC: are men more vulnerable?

Men are known to have increased risk, higher incidence and worse prognosis for CRC than women (Tables 1 and 2). Men are more likely than women to develop CRC at all ages and the average age at diagnosis in men is four to eight years lower than that in women. Furthermore, the incidence of advanced adenoma is higher in men at all stages of the disease. In a recent study, Majek et al. observed an overall survival advantage for women with CRC and a 14% lower excess risk of death compared with men. CRC symptoms such as rectal bleeding, change in bowel habit, abdominal pain and unintentional weight loss

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<th>Table 1 Gender differences related to the incidence and risk of developing colorectal cancer</th>
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<td>Incidence ASR (W)</td>
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<td>Risk of developing</td>
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<td>Carcinoma</td>
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<td>Advanced neoplasia (after adjusting for colonoscopic factors, age and family history)</td>
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| ASR (W), age standardised rate per 100 000.12,71 OR, odds ratio. |

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<th>Table 2 Gender differences related to prognosis and mortality due to colorectal cancer</th>
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<tr>
<td>Prognosis</td>
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<td>Average five-year survival rate (aged 15 to &gt; 75 years)</td>
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<td>Left colon</td>
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<td>Overall survival after resection</td>
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<td>52.0 (1.3) months</td>
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<td>Disease-free survival after resection</td>
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<td>Hazard ratio (adjusted for age, site, presentation and Duke’s stage)</td>
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<td>Mortality ASR (W)</td>
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ASR (W), age standardised rate per 100 000.12,14,71–73
may also occur in the general population and in patients with relatively benign conditions such as inflammatory bowel disease (IBD); nevertheless, men with IBD have been reported to have a 60% higher risk of CRC than women.20

Gender differences in the incidence and prognosis of CRC are associated with multiple biological, behavioural and environmental factors. The female sex hormone oestrogen has been associated with improved prognosis and reduced risk for CRC in pre-menopausal women and in post-menopausal women receiving hormone replacement therapy (HRT).21,22 By contrast, high serum oestradiol concentration and the adverse effects of androgens on the immune system have been associated with increased risk of CRC and poor survival in women and men, respectively.14,23 Apart from the sex hormones, other biological factors such as a sedentary lifestyle, metabolic syndrome and a high body mass index (BMI) have also been associated with an increased risk of adenomas and CRC in men compared with women.24

Patient delay in seeking medical advice

The natural progression of adenoma to carcinoma and the subsequent appearance of CRC symptoms may take up to 20 years.25 Lower bowel symptoms are less common and less obvious early in the disease and prominent late when the cancer prognosis is poor.26 Hadley et al.27 proposed that the development of CRC without any symptoms in its early stages may be one of the reasons of delayed presentation to the doctor.

The rate of seeking medical advice for rectal bleeding varies between 14% and 45%,28,29 and there has not been any major improvement over the past two decades.30,31 In a recent Australian study, it was found that up to 18% of people with rectal bleeding never consulted a doctor and nearly the same proportion delayed seeking medical help for more than one month after the onset of symptoms.32 Similarly, 20% of people who experienced change in bowel habit never consulted a doctor and up to 37% delayed seeking medical advice for more than one month.

Given that men are less likely to be aware of the risk factors for CRC than women33 and patients’ late presentation to their GPs accounts for the longest delay in the diagnosis of CRC,34 the role of seeking timely medical advice for lower bowel symptoms in better prognosis cannot be ignored. Against this background, we conducted a literature review of the factors influencing the decision to seek medical advice for lower bowel symptoms using a gender lens.

Methods

A search was conducted using Medline, PubMed, CINAHL Plus, EMBASE and PsycINFO (1993–2013) databases with various combinations of search terms including rectal bleeding, prevalence, colorectal cancer, consultation, help-seeking, gender differences and men. The relevant references and bibliographies of the included studies were also reviewed. The abstracts of all the relevant citations were screened independently by two reviewers before inclusion. The inclusion and exclusion criteria for the studies are outlined in Figure 1. When there was a conflict between the reviewers about the inclusion of papers, opinion from the third reviewer was sought. Common themes and concepts across various studies were identified via a narrative synthesis of the findings. Patient delay was defined as the interval between the onset of symptoms and the first medical consultation.

Results

A total of 3020 search results were obtained using various combinations of search terms, of which only 130 (4.3%) studies met our inclusion criteria (Figure 1). After further analysis, 32 studies were included in this review (See online appendix 1). The search was limited to studies published in the past two decades and nearly 50% of them were published in the past 10 years. Of these, 15 were carried out in Europe, 8 in the UK, 3 in the USA, 5 in Australia and 1 in Canada. Most of the studies evaluated help-seeking behaviour for CRC (n = 30), and only two studies focused on lower bowel symptoms. The sample size in the studies ranged between 6 and 1966. Only one study was qualitative, the rest were quantitative.

Delay interval

In this review, patient delay ranged between one week and one year. While 14 studies focused solely on patient delay, the remainder (n = 18) focused on patient as well as system delay. However, we only studied the factors associated with delay between the onset of symptoms and the first medical consultation.

Gender differences in patient delay

Of the 32 studies, 53% (9/17) provided information on help-seeking behaviour for lower bowel symptoms in both men and women and did not focus on gender differences in help-seeking.30,35–42 Of the remaining studies, 35% (6/17) found that men delayed more
than women\textsuperscript{4,32,43–46} and only one study (6\%) showed longer delays in women.\textsuperscript{47} One study reported a longer delay in men younger than 65 years and in women older than 80 years.\textsuperscript{48}

Factors influencing a delay in seeking help

Most of the studies included in the review (\(n = 31\)) identified factors that increased patient delay and nearly 70\% (\(n = 23\)) found factors that reduced delay. The various factors associated with patient delay are summarised in Box 1.

These factors were evaluated using Andersen’s Model of Total Patient Delay as the theoretical framework.\textsuperscript{49} The reason for delay were classified into the first four stages of the model: appraisal delay (time lapse between detection of symptoms by the patient and inferring illness); illness delay (delay occurs as the patient contemplates between consulting a medical practitioner or self-treating the illness); behavioural delay (delay in making an appointment with the GP); and scheduling delay (time lapse between making an appointment and the first medical consultation). The fifth stage of the model, the treatment delay (time between the first medical consultation and the initiation of treatment), was beyond the scope of this study as we focused exclusively on patient delay.

Appraisal delay

Several factors were associated with patients’ appraisal of their symptoms as illness. There was delay in seeking help when symptoms were attributed to a minor illness, were assumed to be part of the ageing process,\textsuperscript{44,46,50,51} or when patients failed to recognise symptom severity.\textsuperscript{30,44,52–56} The non-specific nature and a moderately high prevalence of lower bowel symptoms in the general population may lead to a delay between symptom onset and the initiation of treatment.\textsuperscript{57} Specific symptoms such as rectal bleeding and abdominal pain were...
Box 1 Factors impacting patient delay

Factors that increased patient delay

Demographic factors
- Educational level (low)
- Younger age (< 50 years) in men and older age in women
- Lack of health insurance
- Low income
- Living with spouse (rectal cancer)
- Living in rural areas
- Inadequate transportation facilities
- Difficulty in visiting GP or making appointment
- No screening advice received from the doctor
- Lack of social support or lay referral networks

Health belief factors
- Non-specific symptoms
- Attribution of symptoms to benign conditions and non-recognition of symptom severity
- Attribution of symptoms to changes in diet and lifestyle
- Fear of unpleasant investigations
- Fear of treatment
- Denial of cancer
- Lack of trust in the medical system
- Belief that the symptoms would resolve spontaneously
- Past history of anxiety and depression or of benign bowel disease
- Family history of cancer
- Relief from over-the-counter medications

Factors that reduced patient delay

Demographic factors
- Age (> 60 years) for males
- Retirement
- Educational level (high)

Health belief factors
- Persistent symptoms
- Aggravation of symptoms
- Blood mixed in stool
- Abdominal pain and discomfort
- Multiple symptoms occurring together
- Trust in GP
- Symptom disclosure to someone significant
- Knowledge about the cause of symptoms
- Opportunity to talk to GP about lower bowel symptoms during regular visit

Factors that had a mixed impact on delay
- Embarrassment about the symptoms
- Fear of cancer diagnosis
- Not living with spouse
- Socioeconomic status

associated with relatively less delay in seeking medical advice than non-specific symptoms such as change in bowel habit and unexplained weight loss.40,55 Lack of knowledge and concern about the risks associated with the symptoms or self-treatment prior to seeking professional medical advice increased delay in some studies.30,32 The lack of awareness of being at risk led to misinterpretation of symptoms that further delayed diagnosis and to the trivialisation of symptoms.30,31 Cockburn et al. found that two in every three Australian adults were aware of rectal bleeding as a symptom of CRC; however, fewer than 50% had knowledge about other potential symptoms of cancer.30 Carlsson et al. observed that only 1.5% of the population
warranted seeking medical help for change in bowel habit.\textsuperscript{58} In some instances, patients consulted for bleeding in the toilet pan but not for blood on the toilet paper, thus underestimating the severity of the symptom.\textsuperscript{59}

There were shorter delays in seeking help when the symptoms were frequent, severe or affected a person’s daily life.\textsuperscript{56,54,55} Delay was shorter especially when pain, vomiting and intestinal obstruction were the initial presenting symptoms.\textsuperscript{60}

Illness delay

A number of factors were associated with patients’ preference to seek medical advice over self-treatment. A few studies found that younger patients were more likely to delay,\textsuperscript{34,35} whereas others found no relationship between age and help-seeking behaviour.\textsuperscript{36,40}

Low socioeconomic status and lack of additive private health insurance were other factors that contributed to delay in seeking treatment.\textsuperscript{34,38} Bain \textit{et al.}\textsuperscript{50} observed that people who resided in rural areas were more likely to delay seeking advice than those who resided in urban areas; however, no such difference was observed by Robertson \textit{et al.}\textsuperscript{55}

Behavioural delay

A number of factors were associated with delay in making an appointment with the GP. The worsening of symptoms or the appearance of additional symptoms led to reinterpretation of symptoms by the patients and helped in inferring the illness. A number of patients delayed seeking help due to fear of unpleasant or embarrassing investigations, hoping for spontaneous resolution of symptoms.\textsuperscript{32,34} Knowing a person with CRC within the family or among friends was observed to reduce patient delay.\textsuperscript{34}

Cognitive–emotional factors such as fear of pain, concerns about the examination of private body parts and bowel preparation associated with invasive procedures may further discourage people with symptoms to seek early medical attention.\textsuperscript{61} Fear of cancer or poor prognosis,\textsuperscript{52,54,61} investigations and the consequences of treatment\textsuperscript{34,54} also played a major role in preventing people from making an appointment with the GP. Ramos \textit{et al.}\textsuperscript{6} observed that women mentioned their symptoms directly to their GP, whereas men volunteered to discuss their symptoms during medical consultations for other health conditions. McCaffery \textit{et al.}\textsuperscript{62} observed that increased knowledge about CRC reduced negative perceptions and encouraged timely help-seeking for the symptoms. Social support by lay networks including family and friends played a major role in encouraging people to seek medical help.\textsuperscript{52,54–56,60}

The delay was found to be reduced in the cases where patients discussed their symptoms with a significant someone or did not wait for the spontaneous resolution of symptoms.\textsuperscript{60} There is no clear relationship between marital status and seeking help as some studies observed shorter delays in married men, whereas other studies observed an increased delay.\textsuperscript{30,34}

The literature also suggests that there is anxiety, hesitancy, taboo and embarrassment associated with digital rectal examination in men. These concerns may be magnified when examined by a female doctor and also in those who have previously been victims of sexual abuse.\textsuperscript{63}

Scheduling delay

Patients who trusted their GPs or healthcare practitioners and believed that they could help them were more likely to consult.\textsuperscript{36,47,52} Some patients were not confident in discussing their symptoms with a GP, were worried about the outcome, or put off seeing a GP because of lack of time or other commitments.\textsuperscript{55,62} A few were too busy to visit a GP or believed that consulting a GP would be unpleasant or embarrassing.\textsuperscript{64}

Discussion

The major strength of the study was the use of a theoretical framework to analyse the factors associated with patient delay. The current review expanded on previous reviews on patient-related delays and the results were consistent with them.\textsuperscript{65–68} In addition, we also focused on gender differences in help-seeking behaviour for lower bowel symptoms. One of the major reasons for patient delay was the failure to appraise the symptoms as illness due to lack of adequate knowledge about the risk of CRC in people with persistent lower bowel symptoms. This is in line with the Andersen’s Model of Total Patient Delay proposed by Andersen \textit{et al.} which suggested that appraisal delay was the major component of the entire model of patient delay.\textsuperscript{69} In their study, de Nooijer \textit{et al.}\textsuperscript{52} mentioned that denial of illness could result in patient delay. However, other behavioural and cognitive–emotional factors were also responsible for longer delays in our review.

About 50\% of the studies included in this either did not focus on or were equivocal about the role of gender in help-seeking. In three out of four that focused on gender differences in help-seeking behaviour, men were more likely than women to delay seeking medical advice. However, the gender-specific reasons for patient delay were not evaluated in these studies.
Several factors have been postulated for men’s poor help-seeking behaviour compared with women. In their review, Smith et al. identified stoicism as one of the reasons for men’s reticence because help-seeking was portrayed as a sign of weakness. The fear of being regarded as neurotic, hypochondriac or a time waster by the GP was also associated with men’s poor help-seeking behaviour.26 Ramos et al.26 observed that 50% of primary healthcare patients knew about the modest to high survival rate after CRC diagnosis. Thus, fear of poor prognosis may also prevent people from seeking medical advice.

In this review, the evidence for men’s poor help-seeking behaviour currently stems mostly from quantitative studies because there was only one qualitative study that focused on gender-specific delays and found that men delayed more than women.

Conclusion

The results of this review warrant the need for more qualitative studies and further research into men’s help-seeking behaviour. The majority of the studies in this review were conducted on CRC patients and very few on patients with benign conditions. Research on patients with lower bowel symptoms regardless of cancer will increase our understanding about men’s help-seeking patterns at different stages of the disease. Given that men are biologically more susceptible to bowel cancer, it may be worthwhile facilitating a change in attitude towards symptoms in order to encourage men to seek medical advice at an opportune time.

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PEER REVIEW

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CONFLICTS OF INTEREST

None.

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