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Alimentary Tract

The use of conventional and complementary health services and self-prescribed treatments amongst young women with constipation: A national cohort study

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ABSTRACT

Background: Little research has been conducted regarding the comprehensive health service utilisation in constipation care. This study investigates the comprehensive health service utilisation amongst Australian women with constipation.
Methods: This study draws upon data from the Australian Longitudinal Study on Women's Health. A total of 8074 young women were asked about their frequency of constipation, measures of quality of life, and use of a range of health services and self-prescribed treatments via two postal surveys conducted in 2006 and 2009, respectively.
Results: The prevalence of constipation was 18.5% amongst women in 2009. Constipated women had poorer quality of health than women without constipation. Women who sought help for constipation were more likely to visit multiple groups of conventional and complementary health practitioners compared to women who did not experience constipation ($p < 0.005$). However, women were less likely to visit a specialist for the management of constipation over time (2006 to 2009). There was an increase in the proportion of women with constipation who self-prescribed vitamins/minerals over time ($p < 0.001$).
Conclusion: Although only 4.5% of women sought help for their constipation, given the increasing use of multiple health services across time, more studies are required regarding the optimal treatment in constipation care.

1. Introduction

Constipation is a common chronic condition amongst adults, yet the perceptions of this condition vary from healthcare providers and constipated patients [1]. Patients usually experience constipation as one or more symptoms such as straining, hard stool, and infrequent defecation [2]. A literature review published in 2011 revealed the prevalence rate of constipation amongst the general population ranged from 2% to 27% [1]. Gender and age are the two main predictors of the occurrence of constipation, specifically women and older adults are more likely to experience the symptoms of constipation than men and young/middle-age adults [3,4].

Chronic constipation is a common complaint for practitioners in the clinical settings [4,5], and a considerable constipated patients who seek help from a general practitioner (GP) are consequently referred to a specialist or a hospital clinic for further examination, and/or consult a complementary and alternative medicine (CAM) practitioner [6–8]. CAM refers to a diverse group of health practices and products which are not associated with the medical profession or medical curriculum [9]. In general, patients with constipation are initially recommended by conventional health practitioners to have lifestyle modification (i.e. high-fibre diet and liquid intake), followed by the prescription of laxatives and other medications [10]. It is important to note that constipation-associated symptoms can also be caused by other factors such as diseases (e.g. diabetes, multiple sclerosis, Parkinson's disease, fissures, and haemorrhoids) and side effects of medications (e.g. analgesics, anti-inflammatory drugs, calcium channel blockers, iron supplements, and opioids) [11]. The secondary causes of constipation should be managed alongside idiopathic constipation, which may highlight the

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importance of the management of constipation-related symptoms in the clinical setting [12].

Constipation is primarily considered to involve mild symptoms, which is straightforward to manage, yet untreated constipation-related complications typically leads to a lower quality of life in comparison with the general population [11], where these patients experience impaired mental and physical health and decreased work efficiency [8,13]. In addition to the poor quality of life, constipation also results in high healthcare service costs for patients [1]. The annual estimation of the cost regarding the visit to physicians and their prescribed laxatives for constipation ranged from 18 million dollars to 1 billion dollars in Western countries [14–17]. Moreover, the imposed economic burden on the healthcare system by constipation may be underestimated as many patients with constipation purchase over-the-counter medications as well as CAM therapies and products without the involvement of physicians [14,18,19].

Despite these circumstances, no studies to date have been published investigating the range of health service utilisation amongst constipation sufferers over time. In response to this gap in knowledge, this paper reports the first examination of health services and self-prescribed treatment use amongst young Australian women with self-reported constipation.

2. Methods

2.1. Sample

This research was conducted as part of the Australian Longitudinal Study on Women's Health (ALSWH) which was designed to investigate multiple factors affecting the health and well-being of women over a 20-year period. Relevant ethical approval was gained from the Human Ethics Committees at the University of Queensland and University of Newcastle, Australia. Women in three age groups ("young" 18–23, "mid age" 45–50 and "older" 70–75 years) were randomly selected from the national Medicare database [20]. The focus of this study is women from the young cohort who have been surveyed five times over a thirteen year period (1996–2009). The baseline survey, survey 1 ($n = 14{,}779$), was conducted in 1996 and the respondents have been shown to be broadly representative of the national population of women in the target age groups [21]. Survey 2 was conducted in 2000, survey 3 was conducted in 2003 survey 4 was conducted in 2006 and survey 5 was conducted in 2009. Analyses for this study are restricted to the two recent surveys (2006, 2009) as questions on individual CAM practitioner consultations were only asked in these two surveys. There are 68% and 62% of the women from the young cohort responded to Survey 4 and Survey 5, respectively. The most common reason for non-response is because of being unable to contact/unresponsive [22].

2.2. Measures of health service use and self-prescribed treatments

The women were asked about their frequency of use in the previous twelve months of a GP and a specialist doctor. In addition, they were asked if they had consulted with a range of conventional health providers (i.e. GPs, specialist doctors, hospital doctors, and physiotherapist) and CAM practitioners (i.e. chiropractors, osteopaths, massage therapists, acupuncturists, naturopaths/herbalists, and other CAM practitioner), as well as their consumption of self-prescribed treatments (i.e. vitamins/minerals, meditation/yoga, herbal medicines, aromatherapy oils, and Chinese medicine) in the previous twelve months.

2.3. Measure of health status

The Short-Form 36 (SF-36) Quality of Life questionnaire was used to produce a measure of health status and quality of life [23]. Results of the SF-36 were reported in eight subscales, with higher scores representing better health.

2.4. Outcome measure

Women were asked if they experienced constipation and sought help for it, experienced constipation and did not seek help for it, or did not experience constipation in the previous twelve months. To be specific, in both Survey 4 and Survey 5, women were defined as experiencing constipation if they answered 'sometimes' or 'often' to the following question: 'In the last 12 months, have you had constipation?' These women were then further asked 'did you seek help for constipation?

2.5. Statistical analyses

One-way analysis of variance was used to compare the constipation groups across the eight SF-36 dimensions. Chi-square tests were used to compare constipation groups across consultations and self-prescribed treatments. To correct for multiple comparisons, a modified Bonferroni test was used [24]. All analyses were conducted using the statistical software Statistical Package for Social Sciences (SPSS) for Windows version 19.0 (SPSS Inc, Chicago, Illinois).

3. Results

There were 8074 women who answered the question regarding constipation in survey 5 (2009) and the prevalence of constipation at this time point was 18.5%. The percentage of women who sought help for their constipation was 4.5% ($n = 364$).

Table 1 shows the mean value for the eight SF-36 dimensions across the constipation groups. Both women who sought help for their constipation and women who did not seek help for constipation had significantly poorer health than women who did not have constipation, for all eight dimensions ($p < 0.005$). Women who did seek help for their constipation had significantly poorer health than women who did not seek help for their constipation in bodily pain, general health, physical functioning, role physical, and social functioning ($p < 0.005$).

Table 2 examines the association between the constipation groups and consultations with conventional care providers and CAM practitioners. Women who sought help for their constipation were more frequent visitors to a GP, specialist, hospital doctor, physiotherapist, osteopath, massage therapist, acupuncturist, naturopath/herbalist, and other CAM practitioners, compared to women who did not seek help for their constipation and women who did not have constipation. All associations were statistically significant ($p < 0.005$). There were no statistically significant differences between the three groups and visits to chiropractors. Of note is that of the women who sought help for their constipation, 52% consulted a massage therapist and 24% consulted a chiropractor.

In terms of the number of different CAM and conventional practitioners consulted (data not shown), women who sought help for their constipation consulted on average 1.4 (SD = 1.3) CAM practitioners and 2.6 (SD = 1.1) conventional practitioners, while women who did not seek help for their constipation consulted 0.9 (SD = 1.1) CAM practitioners and 2.1 (SD = 1.1) conventional practitioners, and women who did not have constipation consulted 0.9 (SD = 1.1) CAM practitioners and 2.0 (SD = 1.1) conventional practitioners. The differences in average number of conventional and CAM consultations between women who sought help for their constipation

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