

Burden of irritable bowel syndrome with constipation on healthcare resource utilization, work productivity and activity impairment and quality of life

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BACKGROUND

- Irritable bowel syndrome with constipation (IBS-C) is a chronic and episodic gastrointestinal motility and sensory disorder characterized by recurrent abdominal pain/discomfort, bloating, and constipation
- IBS occurs in 10–15% of the global population^{1–4}
- IBS has been shown to have a substantial economic impact resulting from the direct consumption of healthcare resources, as well as an association with lost work productivity and reduction in individuals' quality of life (QoL)^{5–7}

OBJECTIVE

- This study investigated healthcare utilization, loss of work productivity, daily activity impairment and QoL in subjects with IBS-C compared with subjects without IBS-C

METHODS

Study sampling and data collection

- The study population comprised respondents from the 2004 US National Health and Wellness Survey (NHWS)
- The NHWS is an annual cross-sectional survey of attitudes, behaviors and treatment choices related to healthcare
- Data were collected through self-administered internet-based questionnaires from a US nationally representative sample of community-based adults who were at least 18 years of age

Inclusion criteria for analysis

- Men and women ≥18 years of age were included in the analysis:
 - patients diagnosed with IBS-C or experiencing IBS-C with symptoms (abdominal pain, bloating and constipation) were included in the IBS-C population
 - the non-IBS-C population comprised the remainder of the population

Outcomes measured

Healthcare utilization

- Emergency room visits, number of days hospitalized and visits to physicians in the previous 6 months were used to measure healthcare resource use
- The total number of physician visits was calculated as the sum of visits to all physicians listed in the questionnaire including general/family doctors, cardiologists, dentists, endocrinologists, gastroenterologists, gynecologists, neurologists, and psychiatrists

Productivity loss and activity impairment

- The Work Productivity and Activity Impairment questionnaire, General Health version (WPAI:GH) assessed work time missed, and work and daily activity impairment due to health problems in the past 7 days⁸

Health-related quality of life (HRQoL)

- HRQoL during the month preceding the questionnaire was assessed using the Medical Outcomes Study 8-item Short Form Health Survey (SF-8)⁹
- The SF-8 is a generic HRQoL measure designed to assess physical functioning, role limitations due to physical health problems, bodily pain, general health, vitality, social functioning, role limitations due to emotional problems, and mental health⁹

Statistical analysis

- A multivariate analysis was performed, controlling for age, gender, and number of physical comorbidities such as GERD/heartburn, arthritis, and psoriasis

RESULTS

Patient demographics

- Of the 40,730 respondents, 3,895 (9.6%) reported being diagnosed with IBS-C or having IBS-C symptoms
- More than three-quarters (78.5%) of the IBS-C population were female, compared with 52.5% in the non-IBS-C group (Table 1)
- The non-IBS-C group was significantly older (mean age of 48 years) compared with the IBS-C group (mean age of 43 years) (Table 1)
- Overall, 83% of the IBS-C population had more than one physical comorbidity compared with 70.1% for the non-IBS-C population (Table 1)

Table 1. Demographics and health characteristics.

Characteristic	Total (n=40,730)	IBS-C (n=3,895)	Non-IBS-C (n=36,835)
Mean age (years)	48	43*	48
Gender (% female)	55	78.5*	52.5
One or more physical comorbidities (%)	71.3	83*	70.1

*p<0.001 vs non-IBS-C

Healthcare resource utilization

- IBS-C patients reported an average of seven physician visits in the past 6 months versus four visits for the non-IBS-C population (Figure 1)
- The IBS-C population visited the emergency room on average twice as often as the non-IBS-C population (0.4 vs 0.2 visits) in the last 6 months (Figure 1)
- Subjects with IBS-C reported 0.6 mean hospital days during the past 6 months, versus 0.3 days for non-IBS-C subjects (Figure 1)
- All differences were statistically significant (p<0.001)

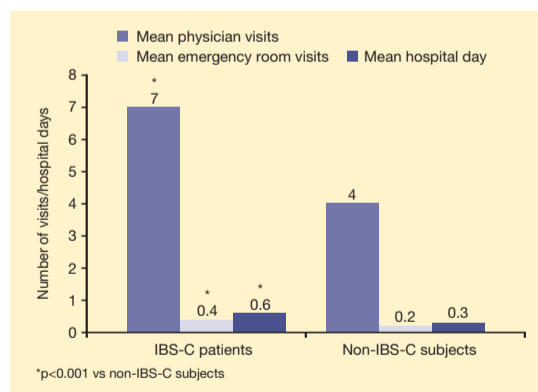


Figure 1. Healthcare utilization in the previous 6 months.

Impact of IBS on work productivity and daily activities

- 24,150 respondents completed the WPAI:GH; of these, 2,187 were categorized as having IBS-C and 21,963 were grouped as non-IBS-C
- In the last week, subjects with IBS-C reported 9.9% absenteeism (missed work time) versus 3.5% in the non-IBS-C group. Presenteeism (impairment at work) was 28.3% and 12.6%, respectively, for subjects with and without IBS-C (Figure 2)
- The overall work productivity loss (absenteeism plus presenteeism) was greater for those with IBS-C than for those without IBS-C (30.8% vs 13.7%) (Figure 2)
- Moreover, impairment in performing daily activities was 42.0% vs 20.8%, respectively, for IBS-C and non-IBS-C subjects (Figure 2)
- All differences were statistically significant (p<0.001)

RESULTS (cont'd)

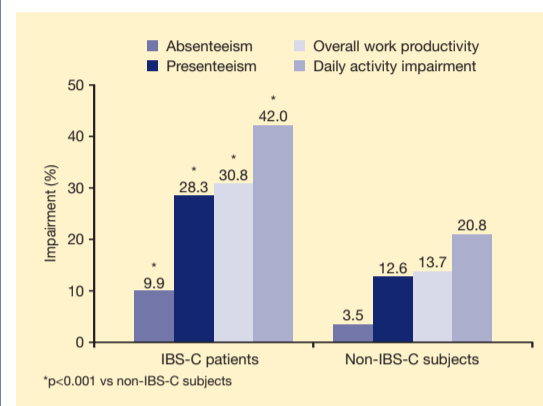


Figure 2. Work productivity and activity impairment.

Health-related quality of life (HRQoL)

- The SF-8 mental and physical component summary scores were 43.0 and 43.2, respectively, for the IBS-C subjects compared with the respective mental and physical summary scores of 50.6 and 48.9 for the non-IBS-C subjects (Table 2)
- All differences were statistically significant (p<0.001)

Table 2. Descriptive statistics for HRQoL.

Scale score		IBS-C patients	Non-IBS-C subjects
SF-8 physical component score	Mean	43.0*	50.6
	Range	9–65	7–70
SF-8 mental component score	Mean	43.2*	48.9
	Range	14–67	10–68
SD		11.17	9.3

SD = standard deviation

*p<0.001

Regression analysis

- Results controlled for age, gender, and number of physical comorbidities, indicated that compared with non-IBS-C subjects, the IBS-C patients had significantly:
 - lower physical and mental component scores (p<0.001)
 - higher work and daily activity impairment (p<0.001)
 - higher utilization of healthcare resources (p<0.001)

CONCLUSIONS

- IBS-C patients had a greater utilization of healthcare resources in terms of physician and emergency room visits, as well as hospitalization compared with subjects without IBS-C
- Productivity loss and daily activity impairment were higher in patients with IBS-C compared with those patients without the disorder
- Patients with IBS-C reported a lower HRQoL than the non-IBS-C population

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This research was funded by Novartis Pharma AG, Basel, Switzerland. Poster presented at WCOG 2005.