

Burden of irritable bowel syndrome with constipation on healthcare resource utilization, work productivity, activity impairment and quality of life in France, Germany and the United Kingdom

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ABSTRACT

Introduction: Irritable bowel syndrome with constipation (IBS-C) is a chronic and episodic gastrointestinal motility and sensory disorder characterized by abdominal pain or discomfort associated with constipation

Aims and methods: The objective of this study was to assess healthcare utilization, productivity loss and quality of life (QoL) in subjects with IBS-C compared with subjects without IBS-C in France (FR), Germany (DE) and the United Kingdom (UK). The study population consisted of respondents to the 2004 National Health and Wellness Survey (NHWS). This survey is an annual cross-sectional survey of a nationally representative sample of the adult population (>18 years) that covers a broad range of health topics. Eligible respondents from FR, DE and UK completed a questionnaire on the internet regarding symptom burden and healthcare utilization, the general health version of the Work Productivity and Activity Impairment questionnaire (WPAI:GH), and the 8-item Short-Form Health Survey (SF-8) QoL questionnaire. A multivariate analysis was performed controlling for age, gender and number of physical comorbidities

Results: Of the 26,468 respondents, 2,696 (10.2%) reported being diagnosed with IBS-C or having IBS-C symptoms (abdominal pain, bloating and constipation). 70% of subjects were female. The mean age was 42.1 years. The IBS-C population in the three countries had greater healthcare utilization: 8.4 physician visits per subject in the previous 6 months versus 5 visits, and 0.3 emergency room visits versus 0.1 visits for the non-IBS-C population. Subjects with IBS-C reported 1.4 mean hospital days during the past 6 months, versus 0.7 days. All the differences were statistically significant (p values <0.005). 12,862 respondents completed the WPAI:GH: 1,168 with IBS-C and 11,694 without IBS-C. Subjects with IBS-C reported 9% work time missed (absenteeism) versus 4.6% in the non-IBS-C population. Impairment at work (presenteeism) was 25.3% and 12.7%, respectively, for subjects with IBS-C and without IBS-C. The overall work productivity loss was greater for those with IBS-C than for those without IBS-C (27.2% vs 13.5%). Impairment in performing daily activities was also higher for IBS-C subjects than for subjects without IBS-C (38.9% vs 21.3%). Patients with IBS-C reported a significantly poorer QoL compared with patients without the disease. The SF-8 mental and physical component summary scores were 42.2 and 44.4, respectively, for the IBS-C population compared with 49.4 and 49.4, respectively, for the non-IBS-C subjects

Conclusions: In FR, DE and the UK, patients with IBS-C had significantly greater utilization of healthcare resources, experienced higher work productivity loss and activity impairment, and had significantly worse QoL than those patients without IBS-C

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 population¹⁻⁴
- IBS has been shown to have a substantial economic impact resulting from the direct consumption of healthcare resources, loss of productivity, and reduction in quality of life (QoL)⁵⁻⁷

AIMS

- This study investigated healthcare utilization, loss of productivity, and QoL in subjects with IBS-C compared with subjects without IBS-C in France, Germany and the United Kingdom

METHODS

Study sampling and data collection

- The study population consisted of respondents from the 2004 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 in 2004 from a nationally representative sample of community-based adults in France, Germany and the United Kingdom

Inclusion criteria

- Men and women at least 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 rest of the respondents

METHODS (cont'd)

Outcomes measured

Healthcare utilization

- Emergency room visits, number of days hospitalized, and visits to physicians in the past 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, diabetologists, 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 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 (ANCOVA) was performed controlling for age, gender, and number of physical comorbidities such as GERD/heartburn, arthritis, and psoriasis

RESULTS

Patient demographics

- Of the 26,468 respondents, 10.2% (n=2,696) reported being diagnosed with IBS-C or having IBS-C symptoms of abdominal pain, bloating and constipation (Table 1)

Table 1. Demographics and health characteristics.

Demographic or health characteristic	Total (n=26,468)	IBS-C (n=2,696)	Non-IBS-C (n=23,772)
Mean age (years)	44.8	42.1*	45.1
Female (%)	48.0	70.0*	45.0
One or more physical comorbidities	63.0	77.0*	61.0

*p<0.001 vs non-IBS-C

- Women comprised 70% of the IBS-C population compared with 45% in the non-IBS-C group
- The non-IBS-C subjects were older (mean age of 45.1 years) than those with IBS-C (mean age of 42.1 years)
- 77% of the IBS-C population had more than one physical comorbidity compared with 61% for the non-IBS-C population
- All differences were statistically significant (p<0.001)

Healthcare resource utilization

- The impact of IBS-C on healthcare resource utilization in the previous 6 months is shown in Figure 1
- IBS-C subjects reported an average of 8.4 physician visits vs 5.0 visits for the non-IBS-C population
- The IBS-C population visited the emergency room three times more on average than the non-IBS-C population (0.3 vs 0.1 visits, respectively)
- Subjects with IBS-C reported on average twice as many hospitalized days than the non-IBS-C subjects (1.4 days vs 0.7 days, respectively)
- All differences were statistically significant (p<0.001)

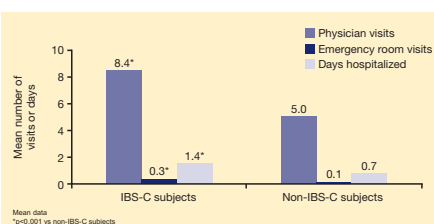


Figure 1. Healthcare utilization in the previous 6 months.

RESULTS (cont'd)

Work productivity and daily activities

- The impact of IBS on work productivity and daily activity impairment in the previous 7 days is shown in Figure 2

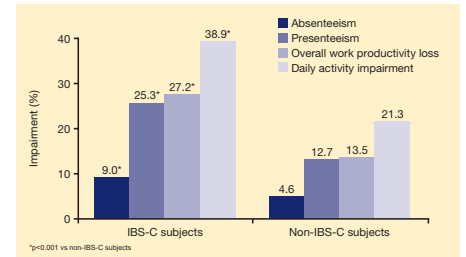


Figure 2. Work productivity and daily activity impairment.

- A total of 12,862 respondents completed the WPAI:GH; of these, 1,168 respondents were in the IBS-C group and 11,694 were in the non-IBS-C group
- Subjects with IBS-C reported 9% work time missed (absenteeism) vs 4.6% in the non-IBS-C subjects. Impairment at work (presenteeism) was 25.3% and 12.7%, respectively, for subjects with and without IBS-C
- The overall work productivity loss (absenteeism plus presenteeism) was greater for subjects with IBS-C than for those without IBS-C (27.2% vs 13.5%)
- Impairment in performing daily activity was 38.9% vs 21.3%, respectively, for IBS-C and non-IBS-C subjects
- All differences were statistically significant (p<0.001)

Health-related quality of life (HRQoL)

- The impact of IBS on HRQoL measures is shown in Table 2
- The mental and physical component summary scores of SF-8 were 42.2 and 44.4, respectively, for the IBS-C subjects vs 49.4 and 49.4, respectively, for the non-IBS-C subjects
- All differences were statistically significant (p<0.001)

ANCOVA results

- The results, controlled for age, gender, and number of physical comorbidities, indicated that the IBS-C population had significantly lower physical and mental component scores, significantly higher work and daily activity impairment, and significantly higher utilization of healthcare resources than the non-IBS-C population (p<0.001)

Table 2. SF-8 HR QoL measures.

Summary score		IBS-C subjects	Non-IBS-C subjects
Mental component – summary score	Mean	42.2*	49.4
	Range	11–67	7–71
	SD	11.84	9.87
Physical component – summary score	Mean	44.4*	49.4
	Range	11–68	9–69
	SD	11.42	9.69

SD = standard deviation; *p<0.001

CONCLUSIONS

- This analysis of the 2004 NHWS data from France, Germany and the United Kingdom revealed that:
 - IBS-C subjects had a greater utilization of healthcare resources in terms of physician and emergency room visits, as well as hospitalization than the non-IBS-C subjects
 - productivity loss and activity impairment were higher in people with IBS-C compared with people without the disorder
 - subjects with IBS-C reported a lower QoL than the non-IBS-C population
- Effective treatments for IBS may improve sufferers' QoL and reduce the substantial impact placed on healthcare resources

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