BACKGROUND

Irritable bowel syndrome with constipation (IBS-C), one of the most common gastrointestinal disorders, is characterized by recurrent abdominal pain and/or discomfort, bloating, and constipation with a history of BSC. It may also be associated with other symptoms such as headache and fatigue of varying severity. IBS-C causes significant physical and emotional burden on patients, including increased healthcare utilization and services, absence from work, and decreased quality of life.

OBJECTIVE

The objective of this study was to evaluate the burden of IBS-C compared with nonfunctional gastroenterological disorders (non-FGID) and rheumatoid arthritis (RA), on HRQoL, work productivity, and healthcare utilization.

METHODS

Data Source and Samples

The study population was comprised of respondents of the 2010 National Health and Wellness Survey (NHWS), a cross-sectional, self-administered Internet survey completed by a representative sample of adults in the US, the UK, and France. The NHWS began with annual surveys in the United States (US), the UK, and France, and followed by Japan and China in 2011, and most recently to Brazil and in Spain in 2012.

In this study, data from the US, the United Kingdom (UK), and France were used, as an item for IBS-C was sufficient for comparisons in these three countries.

Non-FGID Group

For purposes of evaluating the burden associated with IBS-C, comparisons were made with a sub-sample of 15,000 respondents without IBS and chronic conditions who met all acute conditions on the checklist (the “well” sample).

Chronic Condition Comparator Groups

The burden of IBS-C was also evaluated by comparing IBS-C respondents with non-FGID respondents and respondents with other chronic conditions in the past 12 months.

Outcome Measures

Health-related quality of life (HRQoL) measures were used, including the Physical Component Summary (PCS) and Mental Component Summary (MCS) subscales of the SF-12v2. The SF-12v2 is a generic health questionnaire consisting of 12 questions that are scored to produce eight scales: physical functioning, role physical, bodily pain, general health, vitality, social functioning, role emotional, and mental health. Two summary measures, physical component summary (PCS) and mental component summary (MCS), are scored from a weighted sum of the eight scale scores. The mean scores for the PCS and MCS were used to evaluate the HRQoL burden of IBS-C.

Work Impairment

Work impairment was measured using the Work Productivity and Activity Impairment (WPAI) questionnaire. The WPAI is a 6-item, self-administered questionnaire designed to provide a comprehensive measure of work productivity (including amount of time and money lost due to health problems) and non-work related functional impairment (including time spent on shopping, child care). Items in the WPAI are scored to produce the following measures:

- Percent work missed due to health issues (absenteeism)
- Percent work impairment due to health issues
- Percent daily activity impairment due to health issues

Utilization of Care and Services

Several questionnaire items fielded in the NHWS provides information on utilization of care and services for health problems. This includes hospitalizations, emergency room (ER) visits, and the use of medications. Several time points have been in the emergency room for your estimated condition(s) during thepast 12 months. How many times have you been hospitalized for your estimated condition(s) during the past 12 months?

Statistical Analyses

Prevalence of FGID

The number and frequency of respondents with FGID were compared among all general populations of the US, the UK, and France.

IBS-C, Burden of IBS-C

The burden associated with IBS-C in the NHWS was evaluated by comparing SF-12v2 PCS and MCS scores of respondents with IBS-C to scores of respondents in the general population, and to samples per country with asthma, RA, and migraine.

Prevalence of IBS-C

The mean SF-12v2 PCS and MCS scores of the IBS-C sample (n=103) were compared by country to the mean scores of the non-FGID sample (n=136). Differences in mean PCS and MCS scores were compared between the IBS-C and non-FGID groups in the past six months using analysis of variance (ANOVA) models were used to test the significance of differences in absenteeism, presenteeism, and impairment in performing daily activities compared to the three chronic conditions (all P<0.001). The differences in absenteeism were found between IBS-C and RA in the three chronic conditions (Figure 4).

Comparison of Work-related Outcomes

In all three countries, IBS-C respondents reported significantly higher absenteeism (missed work), presenteeism (impairment at work), and work productivity loss (absenteeism and presenteeism), and impairment in performing daily activities compared to non-FGID respondents (all P<0.001) (Figure 3).

Comparison of Healthcare Utilization

In all three countries, respondents with IBS-C reported significantly higher absences to the ER and hospital in the past 6 months compared to non-FGID respondents and respondents with migraine (IBS-C, RA, and migraine) also had a higher number of visits to the ER and hospital compared to respondents with asthma and RA; however, the differences did not reach statistical significance (Table 1).

Comparison of Mean Number of ER Visits and Number of Hospitalizations

In the UK and France, IBS-C respondents had a significantly (P<0.01) higher number of visits to the ER and hospital in the past 6 months compared to non-FGID respondents and respondents with migraine. IBS-C respondents also had a significantly higher number of hospitalizations in the past 6 months compared to respondents with asthma and RA respectively (Figure 4).

Figure 4. Comparison of Mean Number of ER Visits and Number of Hospitalizations Between IBS-C and non-FGID and Three Chronic Conditions in the US, the UK, and France

Figure 3. Comparison of Work Productivity and Activity Impairment Between IBS-C and non-FGID and Three Chronic Conditions in the US, the UK, and France

CONCLUSIONS

In three countries, respondents with IBS-C showed significant deficits in HRQoL, as well as elevated healthcare utilization compared with non-FGID respondents and respondents with migraine in all three countries.