Journal of Psychosomatic Research 113 (2018) 45–51

Contents lists available at ScienceDirect

Journal of Psychosomatic Research

journal homepage: www.elsevier.com/locate/jpsychores

Fecal incontinence in people with self-reported irritable bowel syndrome: Prevalence and quality of life

Melissa G. Hunt*, Connie Wong, Syed Aajmain, Ifeoluwa Dawodu

University of Pennsylvania, United States

ARTICLE INFO

Keywords:
Catastrophizing
Fecal incontinence (FI)
Health related quality of life (HRQL)
Irritable bowel syndrome (IBS)
Visceral anxiety

ABSTRACT

Irritable bowel syndrome (IBS) is a common functional gastrointestinal (GI) disorder characterized by recurrent abdominal pain and altered bowel habits. IBS is a risk factor for fecal incontinence (FI), the unintentional passage of solid or liquid stool. FI can substantially interfere with health related quality of life (HRQL), leading to heightened anxiety and avoidance behavior. Nevertheless, relatively little research has been conducted on the prevalence of FI in IBS patients. This study evaluated the prevalence of FI in people with self-reported IBS and the relationship between FI and HRQL. 703 people who reported a diagnosis of IBS completed questionnaires on IBS symptom severity, FI symptom severity, HRQL, fear of food, anxiety about visceral sensations, and GI specific catastrophizing. Overall, 60% of people with IBS reported experiencing at least one lifetime episode of FI. In a subsample of 360 people who met strict Rome IV criteria and reported no other GI related co-morbidities, 62% reported experiencing at least one lifetime episode. While people who experienced FI more frequently had worse HRQL statistically, the differences in HRQL between people who had experienced FI and those who had not were not clinically significant. Rather than frequency of FI or physical symptom severity, quality of life was mostly determined by psychological variables, such as fear of food, anxiety, and catastrophizing. This study suggests that FI is quite prevalent in IBS patients, but that the best way to improve HRQL for IBS patients with FI may be to focus on reducing anxiety, catastrophizing and avoidance.

1. Introduction

Irritable bowel syndrome (IBS) is one of the most common functional gastrointestinal (GI) disorders, with an estimated worldwide prevalence of 11% [29]. IBS is defined by the Rome IV diagnostic criteria as recurrent abdominal pain that occurs at least four times per month, or about once a week [8]. The pain is related to defecation, and is associated with changes in the form of stool and/or the frequency of defecation (diarrhea predominant, constipation predominant, or a mixed presentation). Onset must have been at least 6 months prior, but pain must have been recurrent over at least 3 months. These criteria were promulgated in May of 2016 and were an update from the prior Rome III criteria which had been in place since 2006 [27]. This led prevalence estimates in United States adults to drop somewhat, typically from 10% using Rome III criteria to around 6% using Rome IV, with women being about twice as likely as men to meet criteria [38]. Biopsychosocial models characterize IBS as a disturbance of neurogastroenterology or brain-gut interaction [8], and part of the core pathology in IBS is centralized pain processing [25], combined with HPA axis dysregulation, low level inflammation and dysbiosis (e.g. [35]). In addition to the cardinal symptoms, IBS is also associated with bloating, cramping, feelings of urgency, and straining during defecation, all of which can significantly impact daily activities and HRQL [26]. As a result, IBS can negatively affect quality of life in a wide range of areas, including social and occupational functioning, diet, and sexual function [14].

IBS is also a risk factor for fecal incontinence (FI) [3], defined as the unintentional passage of solid or liquid stool [37]. Fecal urgency and fear of fecal incontinence (FI) are significant concerns for many IBS patients, particularly those who suffer from diarrhea. Not surprisingly, FI has an adverse impact on HRQL, psychological well-being, and work productivity, and often leads to embarrassment, social isolation, avoidance behavior, and heightened anxiety ([1, 2].

Nevertheless, very few population studies have examined the actual prevalence of fecal incontinence in IBS. One recent survey found rates of FI of more than once per month in approximately 20% of IBS patients, with even higher rates (43%) if patients with less frequent FI were included [47]. Other studies that have evaluated the prevalence of FI report significantly differing rates, ranging from 6.2% to 57% [1, 9, 28]. These inconsistent results are likely due to differences in patient

* Corresponding author at: Department of Psychology, 425 S. University Ave., Philadelphia, PA 19104, United States.
E-mail address: mhunt@psych.upenn.edu (M.G. Hunt).

https://doi.org/10.1016/j.jpsychores.2018.07.015
Received 8 May 2018; Received in revised form 26 July 2018; Accepted 26 July 2018

selection, the definition of incontinence, and screening questions [37, 47]. In some cases, the sample evaluated may be too specific to inform conclusions about the prevalence of FI in IBS patients more broadly (e.g. evaluating only post-partum women, as in [7]), the definition of incontinence may be too broad (e.g. includes uncontrolled passage of gas as in [1]) or the logic may be backwards (e.g. 31% of patients reporting FI at a tertiary care gastroenterology clinic were diagnosed with IBS, but this does not indicate the percentage of IBS patients who experience FI, as in [30]). In addition, because of FI's associated embarrassment and stigma, IBS patients may not necessarily disclose experiences with FI to physicians without being specifically asked [1]. Thus, FI is likely an underreported condition.

While many IBS patients fear the possibility of FI, we hypothesized that GI symptom-specific, or visceral anxiety [23] and catastrophizing of GI-specific sensations and symptoms [16], would have a greater negative impact on the perceived quality of life of individuals with IBS than severity of IBS symptoms per se, including actual episodes of FI. Prior research has suggested that psychological variables, including worry, anxiety sensitivity, catastrophizing, and fear of food, explain the lion's share of variance in impaired HRQL in IBS (e.g. [15, 19, 20]. Moreover, successful psychosocial treatments for IBS such as cognitive-behavioral therapy are typically mediated by reductions in visceral anxiety and catastrophizing (e.g. [6, 17, 18, 51]. Thus, it is unclear the degree to which the actual experience of FI itself also contributes to variance in HRQL.

This study attempts to fill some of these gaps in the literature on FI in IBS. We assessed the prevalence of FI and its relationship to HRQL, along with psychological variables including visceral anxiety, GI specific catastrophizing and fear of food in a large population sample of people with self-reported IBS.

2. Method

2.1. Participants

A total of 703 participants (506 female, 194 male, 3 other) who self-reported a physician's diagnosis of IBS and were over the age of 18 completed the study. Ages ranged from 18 to 82 years (mean = 35, median = 32). The sample was 82% White/Caucasian, 1% African American, 8% Asian, 3% Hispanic/Latino, and 6% Other/Mixed. Summary demographic data are presented in Table 1.

Inclusion criteria for the study consisted of participant self-report of having been diagnosed with IBS. However, we also included the Rome IV Questionnaire [39] which allows for confirmation that the individual has met diagnostic criteria for IBS according to either Rome IV criteria or Rome III criteria. Participants were not excluded on the basis of not meeting Rome IV criteria, but data are reported separately for all groups. To meet Rome IV criteria, subjects had to endorse abdominal pain or discomfort occurring at least once a week (for women, not exclusively during menstruation), with onset at least 6 months previously. The pain had to be associated with two or more of the following criteria at least 30% of the time: related to defecation, associated with a change in the form of stool, or associated with a change in the frequency of stool.

People with co-morbid GI disorders such as celiac disease or inflammatory bowel diseases were not excluded, since those conditions are known risk factors for secondary IBS. Even celiac patients who are adherent to a gluten free diet are still more likely than controls to experience symptoms of IBS [46]. As many as 80% of IBD patients in one study also met Rome III criteria for IBS [33]. Co-morbid IBS, which is typically diagnosed when the IBD is in remission, significantly reduces HRQL in IBD patients ([33, 34]. However, half the sample (a total of 360 individuals), met the narrowest, most stringent definition of IBS, both meeting Rome IV criteria and reporting no other GI related co-morbidities. An additional 46 individuals (for a total of 406) met either Rome IV or Rome III criteria and reported no other GI related comorbidities. These individuals were also analyzed separately. Non-GI related comorbidities (e.g. asthma, diabetes, fibromyalgia, lupus, and migraines) were reported by patients, but were not analyzed separately. Excluding such individuals would be unrealistic, since up to 65% of IBS patients report such extraintestinal somatic comorbidities [44]. Summary data on diagnoses of IBS and other comorbid disorders are presented in Table 2.

Table 1
Demographic information.

	N
Mean Age	35
Gender	
Male	194
Female	506
Other	3
Ethnicity	
White/Caucasian	569
Black/African American	9
Asian	55
Hispanic/Latino	23
American Indian/Alaska Native	4
Native Hawaiian/Pacific Islander	2
Other/Mixed	41
Marital Status	
Single	240
Married	308
Divorced	32
Widowed	5
Partnered/Cohabiting	118
Occupational Status	
Student	105
Part-time employment	94
Full-time employment	369
Unemployed	135

People with IBS were recruited via the Internet and local GI clinics. Invitations for individuals diagnosed with IBS were posted on IBS specific websites that offered a support group or forum, such as Facebook, Reddit, HealingWell.com, and ibsgroup.org. Participants were also recruited via Amazon Mechanical Turk (MTurk) using Human Intelligence Tasks (HITs) targeting individuals with IBS. Attention check questions were embedded throughout the survey. Data from 150 MTurk participants who failed two or more attention-check items or who took less than 400 s (about 6 min) to complete the survey were deleted, leaving usable data from 214 individuals. Recruitment flyers were left at the registration desk of local GI clinics with invitations for patients with IBS. A few additional participants (7) were recruited from the undergraduate population at a private northeastern university.

This study was approved by the University of Pennsylvania's Institutional Review Board, and informed consent was obtained from all subjects.

Table 2
Diagnosis information.

Diagnosis	N
Irritable Bowel Syndrome	
Met Rome IV criteria	462
Met Rome III criteria (but not RIV)	60
Did not meet criteria	181
Comorbid Diagnoses/Conditions	
Crohn's Disease	33
Ulcerative Colitis	23
ARFID	24
Bariatric Surgery	5
Celiac Disease	75
Other	96