Development and Validation of the Irritable Bowel Syndrome Satisfaction With Care Scale

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BACKGROUND & AIMS: Satisfaction with care is an important measure of quality, from the patients' perspective, and could also affect outcomes. However, there is no standard measure of patient satisfaction for irritable bowel syndrome (IBS) care; a multi-item, condition-specific instrument is needed. **METHODS:** Using standard qualitative methods, we conducted focus groups to identify items that patients associated with satisfaction in their care for IBS. These and additional items identified by experts were placed into a preliminary questionnaire, which was refined through pilot testing and cognitive debriefing by additional patients, as well as standard statistical methods. The resulting instrument and several external validation measures were administered to 300 adult US patients with IBS. Factor analysis was performed to identify clinically relevant subscales and then psychometric properties were assessed. **RESULTS:** We developed an IBS satisfaction with care scale (IBS-SAT) that has 38 items from 5 clinically relevant subscales (connection with provider, education, benefits of visit, office attributes, and access to care). This IBS-SAT had a high level of internal consistency (Crohnbach's $\alpha = .96$). Convergent validity was established by correlations between the IBS-SAT and a single, global satisfaction with care question ($r = 0.68$; $P < .001$), and a generic, multi-item satisfaction scale (physician satisfaction questionnaire-18) ($r = 0.75$, $P < .001$). Discriminant validity (among known groups) was established across groups that were stratified based on IBS-quality of life ($r = 0.34$; $P < .0001$), IBS severity (functional bowel disorders severity index) ($r = -0.21$; $P < .001$), and number of unmet expectations ($r = -0.38$; $P < .0001$). **CONCLUSIONS: The IBS-SAT is a validated measure of patient satisfaction with IBS care. As a new, condition-specific instrument, it is likely to be a useful tool for quality measurement, health services research, and clinical trials.**

Keywords: Quality of Care; Bloating; Abdominal Pain; Treatment.

Irritable bowel syndrome (IBS) is a leading reason for both primary care and gastroenterologist office visits at an annual direct cost that exceeds one billion U.S. dollars.[1,2] Still, despite these exorbitant expenditures, the quality of care provided is likely variable and often suboptimal. However, this remains largely unknown, in part because metrics for assessing quality of IBS care are not readily available.[3]

One potentially relevant and valuable measure of the quality of IBS care is patient satisfaction,[4] which can be conceptualized as how, relative to a subjective standard, a patient cognitively and affectively evaluates his or her health care experience.[5] Although this may seem to be a relatively minor assessment measure, satisfaction is quite important because satisfied patients are better able to recall medical information and physician advice,[6] are more involved in their care, and more adherent to therapy.[7] Satisfied patients are also more likely to maintain a relationship with their provider and less likely to "doctor-shop."[8] These factors have sometimes been linked to improved health outcomes and lower health care costs.[7]

Thus, patient satisfaction is significant both as a measure of quality from the patient's perspective and, by extension, as a potential determinant of outcomes. One approach to measuring satisfaction is to use global assessment measures consisting of 1 or 2 simple questions.[7,9] We used this approach in a recent large survey and found that patients with IBS are often dissatisfied with the care they receive.[10] However, because satisfaction is a multidimensional construct, global measures may be nonspecific, insensitive, and, at times, unreliable.[9] Furthermore, single-item measures may be overly inflated,[6] possibly invalid,[11] and difficult to interpret in terms of their content. Notably, they do not allow the investigator to access the dimensions that contribute to the patient's overall satisfaction. Conversely, multi-item measures that are tailored to specific patient populations appear to be more sensitive, specific, and reliable and consequently yield more meaningful results.[12] Along these lines, multi-item, condition-specific satisfaction with treatment scales have been developed for a wide range of medical services, including diabetes care and physical rehabilitation. Considering the high prevalence, morbidity, and costs associated with IBS, as well as the rather specific needs of patients with this condition, a specific scale to measure IBS satisfaction with care is strongly necessary.

Accordingly, we used standard scale development methods to develop the IBS Satisfaction With Care Scale (IBS-SAT). In this article we report the results of a study to develop and assess

Abbreviations used in this paper: FBDSI, Functional Bowel Disorders Severity Index; IBS, irritable bowel syndrome; IBS-C, irritable bowel syndrome with constipation; IBS-M, mixed irritable bowel syndrome; IBS-QOL, Irritable Bowel Syndrome Quality of Life Scale; IBS-SAT, Irritable Bowel Syndrome Satisfaction With Care Scale; SDRS, Social Desirability Response Scale; UNC, University of North Carolina.

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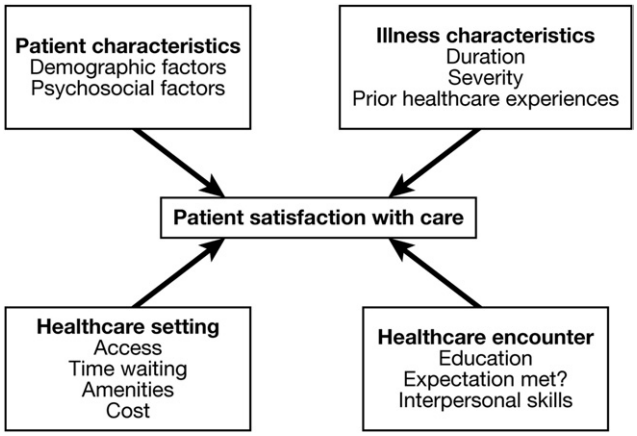

Figure 1. Conceptualization of satisfaction with IBS care as a multidimensional construct related to patient characteristics (demographic and psychosocial factors), illness characteristics (duration, severity, prior health care experiences), the health care setting (access, amenities, and cost), and the health care encounter.

the psychometric properties of the IBS-SAT, including conceptual and measurement model (subscale structure), reliability (internal consistency), and validity (content, convergent and discriminant construct validity, and known-groups validity).

Methods

Conceptual Framework

Based on prior work on patient satisfaction[11,13–16] and our experience providing IBS care, a priori we conceptualized satisfaction with IBS care as a multidimensional construct related to patient characteristics (demographic and psychosocial factors), illness characteristics (duration, severity, prior health care experiences), the health care setting (access, amenities, and cost), and the health care encounter (Figure 1).

Item Generation

Factors that are important for determining patient satisfaction were identified using a qualitative research approach.[4] First, through the University of North Carolina (UNC) general and functional gastroenterology clinics, as well as campus-wide e-mails and flyers, we recruited a total of 19 patients with physician-diagnosed IBS to participate in 1 of 3 focus groups. Subjects were screened to verify the diagnosis of IBS by Rome III criteria[17] and to obtain demographic information and clinical features, including IBS subtype and severity. When possible, subjects were allocated across the focus groups to allow for adequate distribution by IBS subtype, and severity.[18] Characteristics of the total group of subjects who participated are shown in Table 1.

The focus groups, which were conducted in June and July 2010, employed standardized methods previously used by the investigators to develop quality-of-life instruments. A facilitated discussion was conducted in a specific order guided by a standard, written protocol, which was used to guide a discussion focused on the specific aspects of care that are important to patient satisfaction. The following questions were used to prompt focus group discussions: "How satisfied are you with the health care that you are receiving for your IBS?" "What are the areas of dissatisfaction?" "What kinds of factors allow you to feel satisfied with your health care for IBS?" "Are there other factors that you would like to occur to make you feel satisfied with your IBS care?"

After each focus group the study investigators discussed the proceedings and reviewed notes to identify individual items and content groups (ie, domains). Likewise, 2 investigators who were not involved with the focus groups reviewed focus group transcripts and jointly identified their own set of items and content groups. Investigators from both groups then met and reconciled any discrepancies between their lists of individual items and content groups. Ultimately, 38 items were identified. These were grouped into 1 of the following content areas: health care system, health care provider (competence, interpersonal and communication skills, resources, and trivializing), and IBS (condition and outcome).

Next, 6 nonpatient experts (5 gastroenterologists and 1 patient advocate) on IBS care were interviewed to identify additional features that may affect patient satisfaction. This process generated 9 additional items. Finally, 6 items from a generic satisfaction instrument (Patient Satisfaction Questionnaire III[19]) that measure factors hypothesized to be important for satisfaction with care (Figure 1) were added.[4] In total, the preliminary scale included 53 items.

Scale Refinement

These 53 items were used to draft a preliminary satisfaction scale. Scale items were formed as evaluative questions

Table 1. Focus Group Participant Characteristics (n = 19)

Age, median (range), *y*	42.5 (25–87)
Source of recruitment	
GI Clinic	11
E-mail advertisement	5
Flyer	2
Friend	1
Gender	
Female	18
Male	1
Race	
Caucasian	16
African American	3
Employment	
Employed	12
Student	3
Retired	2
Unemployed	2
Time since diagnosis	7 mo–40 y
IBS subtype	
IBS-C	7
IBS-D	8
IBS-M/U	4
IBS severity (FBDSI)	
Mild	8
Moderate	6
Severe	5
Provider seen for IBS	
Academic gastroenterologist	12
Community gastroenterologist	4
Primary care physician	3

GI, gastrointestinal; IBS-D, irritable bowel syndrome with diarrhea; IBS-M/U, mixed/unspecified irritable bowel syndrome.