

Assessment of Functional Gastrointestinal Disorders Using the Gastro-Questionnaire

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The purpose was to investigate the reliability and factorial structure of the Gastro-Questionnaire for the screening and psychometric measurement of functional gastrointestinal disorders (FGDs). The questionnaire contains 27 gastrointestinal symptom items drawn from the Rome–II criteria, which are rated by frequency and severity, as well as some items to exclude organic diseases. The questionnaire was administered to 259 normal participants and to 69 participants of the annual German meeting of patients with irritable bowel syndrome. Reliability was good (Cronbach's alpha for frequency and severity items: $\alpha = .86$ and $\alpha = .87$). Factor analysis yielded a six-factor solution explaining 60.7% of the variance. Diagnostic frequencies ranged from 32.8% to 100% for FGDs in general, from 1.3% to 76.8% for irritable bowel syndrome, and from 7.0% to 100% for functional dyspepsia, depending on samples and symptom definitions. The Gastro-Questionnaire is a very economic, reliable, and content-valid instrument for the assessment of FGDs.

Key words: functional gastrointestinal disorders, assessment, Gastro-Questionnaire, symptom frequencies, Rome criteria

Functional gastrointestinal disorders (FGDs) are reported to be very common. They are commonly defined as “a variable combination of chronic or recurrent gastrointestinal symptoms not explained by structural or biochemical abnormalities” (Drossman et al., 1990). However, this basic definition has to be regarded as preliminary, because physiological etiology might be verified by future research. In epide-

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miological studies on irritable bowel syndrome (IBS), which is the most prominent of these disorders, lifetime prevalence rates of about 15% to 20% in the general population were observed (Talley, Zinsmeister, van Dyke, & Melton, 1991; Jones & Lydeard, 1992; Longstreth & Wolde-Tsadik, 1993). Agréus, Svärdsudd, Nyrén, and Tibblin (1995) found that 25% of an unselected Swedish adult population fulfilled diagnostic criteria for functional dyspepsia (FD). In a study by Drossman et al. (1993), 69% of a sample of 5,430 U.S. householders met the criteria for at least 1 of 20 FGDs; that is, more than two thirds of the U.S. population may be affected by FGDs.

However, frequencies vary widely. In the study by Drossman et al. (1993), only 11% of the participants reported symptoms compatible with the diagnosis of IBS, and prevalence of FD was less than 3%. Sandler (1990) reported findings from the Second National Health and Nutrition Examination survey indicating that 4.7 million people (2.9% of the U.S. population) had self-reported diagnoses of IBS (spastic colon or mucous colitis). Talley, Boyce, and Jones (1996) found IBS in 11.8% and FD in 11.5% of the participants in an Australian random sample. In a recent study, Herschbach, Henrich, and Von Rad (1999) reported lifetime prevalence rates of about 2% for IBS and 11% for FD in a representative sample of the German adult population.

Discrepancies may be explained partly by different diagnostic definitions, as determined by the Manning criteria (Manning, Thompson, Heaton, & Morris, 1978), Rome criteria (Drossman et al., 1990), and Rome-II criteria (Talley et al., 1999; Thompson et al., 1999). These are characterized by different symptom sets and definitions yielding different prevalence rates. Recent epidemiological studies on IBS were based on the international consensus (Rome) criteria for FGDs (Drossman et al., 1990). According to the Rome criteria, FGD diagnoses are based on specific symptom sets and scores. In addition, a distinct threshold for the persistence of functional gastrointestinal symptoms (FGSs; >12 weeks during the last year) was defined for most FGDs in a recent revision of the Rome criteria, the Rome-II criteria (Clouse, Richter, Heading, Janssens, & Wilson, 1999; Talley et al., 1999; Thompson et al., 1999; Whitehead et al., 1999). However, compared with common definitions of psychosomatic disorders (e.g., somatoform disorders) according to the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed. [DSM-IV]; American Psychiatric Association, 1994) or the International Classification of Diseases (ICD)-10 (World Health Organization, 1993), the Rome-II criteria are incomplete. They contain no severity index (e.g., distress, impairment, illness behavior) or threshold definitions to differentiate between clinically relevant symptoms and common conditions of lowered well-being. This problem is very salient for diagnostic definitions in epidemiological studies, because symptom frequencies basically depend on what is regarded as an abnormal condition. Likewise, this problem is relevant for research and practice of standardized psychological treatments, which need to re-

fer to diagnostically homogeneous populations, as commonly defined by symptom definitions, severity indexes, and inclusion and exclusion criteria.

Furthermore, standardized psychometric instruments for dimensional measurement of FGD, as required for evaluations of natural course and treatment of FGSs, have not been available until now. Many studies used symptom diaries instead. As a consequence, Boyce, Gilchrist, Talley, and Rose (2000) presented an instrument not evaluated yet, the Bowel Symptom Severity Scale. It was used in a pilot study on cognitive-behavioral IBS treatment to cover dimensional aspects (frequency, distress, impairment) of IBS symptoms.

Another important issue is that even well-elaborated instruments (e.g., Boyce et al., 2000; Talley, Boyce, Owen, Newman, & Paterson, 1995; Talley, Phillips, Wiltgen, Zinsmeister, & Melton, 1990) focus on specific FGDs following the Rome classification, instead of considering the full range of FGSs. Subsyndromal variants of FGDs, atypical symptom combinations, the significance of the total number of symptoms, and empirically based criteria for the classification of FGD were not sufficiently addressed in epidemiological studies (Drossman et al., 1993; Herschbach et al., 1999; Jones & Lydeard, 1992; Sandler, 1990; Talley, Boyce, & Jones, 1996).

The aim of this study was to investigate the practical use and psychometric properties of a recently developed self-rating instrument for the screening, dimensional measurement, and classification of FGD. One particular focus was to determine effects of various symptom definitions on frequencies of FGDs in normal participants and patients, to evaluate the practical consequences of the additional severity index and the symptom definition proposed. Furthermore, the factorial structure of the questionnaire on the basis of symptom severity items was investigated to determine the compatibility of its empirical dimensions with the Rome-II classification.

METHODS

Participants

The initial sample consisted of 259 participants from the German general population randomly recruited in public areas of the cities of Mainz, Cologne, and Frankfurt (e.g., waiting areas of the Frankfurt airport). This sample was unselected and is not representative of the German general population. Because participants were not patients, they had not been screened systematically for gastrointestinal medical conditions. In addition, 69 participants particularly affected by various combinations of FGSs were recruited at the German IBS patient meeting. The common characteristic of these participants was that they had been told by a specialized physician that their symptoms were functional after careful examination. They did not necessarily have to meet Rome-II IBS criteria. Participants were asked to participate, on a voluntary basis, in a scientific study on health problems in the general population. Participants

completed a self-administered questionnaire on gastrointestinal symptoms, gastrointestinal medical conditions, and health care use.

Assessments

FGDs were assessed by a recently developed screening instrument for the self-rating of gastrointestinal complaints, the Gastro-Questionnaire. It contains 27 symptoms (Table 1), which are rated by frequency and severity (defined as subjective distress or suffering). Symptoms were not selected empirically but were derived on a theoretical basis from the Rome-II criteria. For example, IBS and each of its subtypes can be combined easily from Items 10, 11, 12, 14, 15, 16, 18, 19, 20, 21, 22, and 24; FD and its subtypes can be combined from items 2, 4, 5, 6, 9, and 12. German translations were taken mainly from the IBS Consensus Report of the German Society for Digestive and Metabolic Diseases (Hotz et al., 1999) and completed by common medical expressions. Passage of blood is included in the symptom list as an additional indicator to rule out structural explanations for symptoms. Frequency of each symptom during the last 12 months is rated on a 4-point scale: 0 (*not at all*), 1 (*from time to time*), 2 (*frequently*, i.e., >25% of days), and 3 (*nearly always*, i.e., >75% of days). Symptom severity is rated on a 5-point scale: 0 (*no distress*) to 4 (*very severe distress*), except for two FGSs that are not associated with bodily sensations (passage of mucus and stool residues in underwear). Administration of the questionnaire is very economic and requires less than 15 min. Diagnoses of 20 FGDs according to the Rome and Rome-II criteria can be derived directly from the Gastro-Questionnaire on the basis of computer algorithms. For some symptoms (e.g., abdominal pain), additional questions are included to cover the Rome criteria entirely (e.g., symptom associated or relieved with defecation, eating, etc.). Furthermore, gastrointestinal medical conditions are excluded by several questions on organic disease and weight change. Participants are questioned explicitly on medical conditions diagnosed by a physician. Following the Rome criteria, FGDs (e.g., IBS, FD, functional diarrhea) are diagnosed comorbidly in general, apart from residual categories. The procedure for specifying FGDs can be varied easily along different symptom definitions. Sociodemographic and clinical characteristics (job status, educational level, family status, partner situation, and previous psychotherapeutic treatments) also were investigated.

Definitions

Symptom sets for FGDs were based on the Rome-II criteria. To analyze FGS and FGD frequencies, we applied three different thresholds: First, we evaluated FGS and FGD frequencies without considering either the persistence or the severity of symptoms. In the second step, FGD diagnoses were determined considering a persistence criterion corresponding to the Rome-II criteria (enduring

symptoms have to be present for at least 12 weeks during the preceding 12 months). We used a criterion of “more than 25% of days during the last 12 months,” which is very similar to the Rome–II definition. However, the definition used in the Gastro-Questionnaire can be varied easily, because it need not necessarily refer to a 12-month period. This may be of particular value for repeated application of the Gastro-Questionnaire as a dimensional measure in studies on treatment evaluation and the natural course of FGDs. Third, we analyzed frequencies of FGDs considering not only the persistence but also the severity of FGSs (i.e., FGDs were diagnosed only if symptoms were associated with distinct feelings of distress).

Statistical Analyses

Split-half reliability (Spearman–Brown) and internal consistency (Cronbach’s alpha) were investigated separately for frequency and severity item subscales. Frequencies of FGS and FGD diagnoses were calculated according to the different symptom thresholds defined. Factor analysis was conducted by using varimax rotation. *T* tests and chi-square-tests were calculated to analyze associations of FGDs with age and sex.

RESULTS

The mean age of the participants in the general population sample was 33.5 years ($SD = 14.7$). Sixty-three percent of the participants were female, 32% were married, 64% lived in long-term partnerships, 42% had finished secondary school or had a higher degree, and 78% were employed. Eleven percent of the participants had received psychotherapy previously on an outpatient basis and 2% on an inpatient basis.

In the sample collected at the German IBS patient meeting, only age and sex were investigated as sociodemographic characteristics. Sixty-seven percent of the participants were female. Mean age was 53.4 years ($SD = 16.0$).

Because the patient sample was not comparable regarding mean age, and only age and sex were recorded as socioeconomic characteristics, these data were used only to compare FGS and FGD frequencies in both samples on a descriptive basis. Statistical analyses on reliability, factorial structure, and age and sex differences were conducted exclusively for the general population sample.

Thirty of 259 participants in the general population sample (12%) and 13 of 69 participants in the sample collected at the German IBS patient meeting (19%) reported structural or biochemical gastrointestinal conditions incompatible with FGD diagnoses and were excluded from further analyses.

Split-Half Reliability and Internal Consistency

Overall Cronbach's alpha was .86 for frequency items and .87 for severity items ($N=238$) based on the general population sample. For the split-half reliability, we determined overall Spearman-Brown coefficients of .77 for frequency items and .81 for severity items.

Factorial Structure of the Gastro-Questionnaire

Factor analysis was conducted on the basis of items statistically generated from both frequency and distress items. Symptoms present less than 25% of days were counted 0; otherwise, they were counted 1 and multiplied with the corresponding distress rating. This is of particular importance, because former factorial approaches were based on the frequency or the simple presence of FGSs instead of considering aspects of distress or suffering.

A varimax-rotated six-factor solution explaining 60.7% of the variance, and including all FGSs, was revealed as most appropriate model (Table 1). Factor I includes four symptoms of diarrhea-type IBS, whereas three symptoms of obstipation-type IBS are located on Factor V. The correlation of .16 between these two factors is significant but small, indicating that IBS is a very heterogeneous syndrome rather than a distinct diagnostic entity. Symptoms of functional abdominal bloating are located on Factor II, whereas Factors III and IV mainly involve gastroduodenal and esophageal disorders, respectively. Factor VI consists of only two items and thus is difficult to interpret.

Frequencies of FGSs in Normal Participants and Patients

Almost 99% of the participants in the general population sample reported at least 1 FGS (of 27) to be present from time to time; 59% reported at least 1 symptom (of 27) persisting more than 25% of the time during the last 12 months, and 37% were affected by symptoms associated with distinct distress (rated 2 or higher) and persisting more than 25% of days. Frequencies of most specific symptoms were too small to identify significant differences in age or sex. Regarding the total range of FGSs, we found no significant differences in age or sex between participants reporting at least 1 of 27 symptoms and nonsymptomatic participants. In the patient sample, all participants reported at least one FGS, regardless of the symptom threshold applied. Most frequent complaints associated with distinct distress were abdominal bloating, feeling of distension, frequent farting, and abdominal pain, which are IBS symptoms (Table 2).

TABLE 1
Factor Analysis of the Gastro-Questionnaire in a General Population Sample of
229 Participants After Excluding Self-Reported Gastrointestinal Organic Diagnoses

	1	2	3	4	5	6	Σ
Variance explained (%)	23.4	10.4	9.0	6.5	6.1	5.4	60.7
Eigen value	5.6	2.5	2.2	1.6	1.5	1.3	
Abdominal pain	.58	.22	.31	.20	—	.04	
Stools very often	.83	.10	.10	.08	.13	.0	
Stool urgency	.77	.07	.23	.06	.01	.02	
Loose or watery stools	.78	.21	-.01	.22	—	.08	
Abdominal bloating	.11	.82	.13	.13	.02	-.04	
Feeling of distension	.23	.66	-.03	.06	.09	.44	
Bowel noises	.30	.60	-.17	.15	.24	-.02	
Feeling of incomplete evacuation	-.06	.54	.28	.16	.31	.10	
Frequent farting	.09	.70	.28	-.02	.03	.0	
Regurgitation of food	.05	.31	.54	-.04	.08	-.17	
Difficulty swallowing	.38	-.15	.59	-.07	.23	-.11	
Vomiting	.12	.02	.87	.08	.02	-.04	
Intolerance of several foods	.03	.11	.62	-.02	-.07	.21	
Frequent changing of stool consistency	.30	.25	.65	-.03	.15	.24	
Sensation of lump in the throat	.24	.01	-.05	.66	.03	.09	
Nausea	.34	-.15	.26	.47	-.12	.08	
Heartburn	-.05	.09	-.03	.69	.18	-.04	
Chest pain	.25	.20	-.06	.70	-.18	.10	
Pain in the rectum	.02	.08	.03	.66	.08	-.07	
Stools very rarely	.05	.24	.23	-.09	.66	.06	
Hard or lumpy stools	-.04	.13	-.02	.47	.58	.41	
Straining during a bowel movement	.09	.06	-.02	.10	.84	-.05	
Abdominal fullness	.17	.28	.27	.18	—	.69	
Fecal soiling	-.03	-.09	-.03	-.07	.05	.84	

Frequencies of FGD in Normal Participants and Patients

When we considered neither the persistence nor the severity of symptoms, FGDs were found in all participants in the patient sample and nearly all participants in the general population sample. When we applied more restrictive symptom definitions, frequencies of FGDs decreased dramatically. Although FGDs were detected in 48% of the participants when we used a definition corresponding to the Rome-II criteria (i.e., considering only those symptoms that were present more than 25% of days during the last 12 months), this rate further decreased to 32% when we considered only symptoms associated with distinct, severe, or very severe distress. Most frequent diagnoses in the general population sample were functional abdominal bloating, functional

TABLE 2
Frequency of Gastrointestinal Symptoms in General Population and German IBS Patients^a

Item	General Population Sample ^b			IBS Patient Meeting Sample ^c		
	I %	II %	III %	I %	II %	III %
Sensation of lump in the throat	26.6	3.5	2.2	35.7	12.5	8.9
Regurgitation of food	76.9	10.5	3.0	83.9	33.9	30.4
Difficulty swallowing	8.7	1.3	1.3	25.0	1.8	1.8
Nausea	64.6	7.0	4.4	75.0	30.4	25.0
Vomiting	28.0	2.2	1.8	17.9	3.6	3.6
Heartburn	27.5	5.7	4.4	35.7	14.3	12.5
Chest pain	27.1	2.2	1.3	39.3	21.4	19.6
Intolerance of several foods	38.4	6.1	4.8	91.1	67.9	62.5
Abdominal fullness	49.3	14.4	6.5	85.7	53.6	50.0
Abdominal bloating	81.7	24.5	16.6	100.0	92.9	92.9
Feeling of distension	47.1	14.8	11.8	92.9	78.6	78.6
Abdominal pain	63.7	8.7	6.5	96.4	75.0	73.2
Bowel noises	75.9	14.8	5.2	92.9	75.0	71.4
Stools very often	40.2	9.6	4.8	82.1	55.4	51.8
Stools very rarely	27.9	7.4	3.9	30.4	8.9	8.9
Stool urgency	53.8	6.6	5.3	85.7	64.3	57.1
Fecal soiling	7.0	0.7	0.4	41.1	21.4	21.4
Frequent changing of stool consistency	57.2	10.9	3.0	96.4	64.3	55.4
Loose or watery stools	52.0	9.6	4.8	85.7	67.9	60.7
Hard or lumpy stools	64.7	9.2	6.5	71.4	32.1	28.6
Straining during a bowel movement	31.8	3.9	3.1	58.9	26.8	26.8
Passage of mucus	18.3	1.7	—	67.9	26.8	—
Passage of blood	8.7	0.0	—	16.1	5.4	—
Feeling of incomplete evacuation	42.8	7.9	6.1	89.3	58.9	57.1
Stool residues in underwear	20.1	1.3	—	48.2	19.6	—
Frequent farting	76.9	19.7	8.3	100.0	82.1	78.6
Pain in the rectum	25.8	5.7	3.9	53.6	17.9	16.1
Any functional gastrointestinal symptom	98.7	59.0	36.7	100.0	100.0	100.0

Note. Thresholds are as follows: I = Symptom present from time to time; II = Symptom present > 25% of days during the last 12 months; III = Symptom present > 25% of days during the last 12 months and at least distinct distress.

^aSamples of 229 general population participants and 56 German IBS patient participants of the meeting, after excluding self-reported gastrointestinal organic diagnoses. ^b*N* = 229. ^c*N* = 56.

constipation, and any form of functional dyspepsia. When we used the most restrictive symptom definition, FGD frequencies in the general population sample were 1.3% for IBS and 7.0 for FD, compared with 26.8% for IBS and 75.0% for FD in the patient sample (Table 3).

TABLE 3
Frequencies of Functional Gastrointestinal Disorders^a

<i>Functional Gastrointestinal Disorder</i>	<i>General Population Sample^b</i>			<i>IBS Patient Meeting Sample^c</i>		
	<i>I %</i>	<i>II %</i>	<i>III %</i>	<i>I %</i>	<i>II %</i>	<i>I %</i>
Globus	21.8	3.1	1.7	17.9	8.9	7.1
Functional chest pain	27.1	2.2	1.3	39.3	21.4	19.6
Functional heartburn	7.4	4.8	3.9	1.8	5.4	3.6
Functional dysphagia	8.7	1.3	1.3	25.0	1.8	1.8
Unspecified functional esophageal disorder	0.0	0.0	0.0	0.0	0.0	0.0
Functional dyspepsia (ulcer-like)	38.4	5.7	4.4	78.6	46.4	46.4
Functional dyspepsia (dysmotility-like)	65.1	2.2	0.9	78.6	26.8	25.0
Functional dyspepsia (reflux-like)	19.7	0.4	0.4	33.9	8.9	8.9
Functional dyspepsia (unspecified)	5.2	2.6	1.7	5.4	16.1	16.1
Dyspepsia (global)	78.2	10.0	7.0	100.0	76.8	75.0
Aerophagia	22.7	8.7	2.6	3.6	7.1	7.1
Irritable bowel syndrome	28.4	3.5	1.3	76.8	33.9	26.8
Functional constipation	65.9	10.0	7.4	75.0	32.1	28.6
Functional diarrhea	30.1	4.8	0.9	76.8	46.4	41.1
Functional abdominal bloating	10.9	24.9	15.3	0.0	25.0	26.8
Unspecified functional bowel disorder	0.0	0.0	0.0	0.0	0.0	0.0
Chronic functional abdominal pain	63.8	1.7	1.7	96.4	17.9	17.9
Functional incontinence	24.5	1.7	1.7	63.4	35.7	35.7
Levator syndrome	3.9	2.6	2.6	12.5	8.9	8.9
Proctalgia fugax	9.6	0.9	0.9	21.4	3.6	3.6
Any functional gastrointestinal disorder	97.8	48.0	32.3	100.0	100.0	100.0

Note. Threshold levels are as follows: I Symptoms present from time to time; II = Symptoms present >25% of days during the last 12 months; III = Symptoms present >25% of days during the last 12 months and at least distinct distress.

^a*n* = 229. ^b*n* = 229. ^c*n* = 56.

DISCUSSION

In this study, we investigated the reliability and factorial structure of the recently developed Gastro-Questionnaire and evaluated effects of various symptom definitions on frequencies of FGD screening diagnoses.

The implications of our results are limited by the fact that the sample investigated was not representative of the general population, the sample size was relatively small compared with epidemiological studies, and external validity was not determined. On the other hand, those limitations apply for most studies conducted until now. Only one carefully conducted large-scale study (Drossman et al., 1993) investigated the total spectrum of FGDs according to the Rome criteria, and none are available on the basis of the Rome-II criteria. Hence, findings of this study may be of particular value for certain neglected aspects of FGD. Obviously, self-rating instruments like the Gastro-Questionnaire cannot replace medical examination or carefully conducted standardized diagnostic interviews. However, self-rated questionnaires are indispensable and widely accepted measures for course and treatment evaluations as well as for diagnostic screening in clinical research and practice. The particular value of the Gastro-Questionnaire is based on economic administration, its use in advanced diagnostic decision making, and its applicability for repeated dimensional measurement.

Split-half reliability and internal consistency of both frequency and severity items of the Gastro-Questionnaire were good. Content validity may be derived from the fact that symptoms and symptom sets were directly and literally derived from the Rome criteria, as well as the symptom frequency threshold of 25% of days during the last 12 months, which almost corresponds to the Rome definition (>12 weeks during the past 12 months). Because we mainly used official symptom translations of the German Society for Digestive and Metabolic Diseases (Hotz et al., 1999), language effects on content validity should be limited. Discrimination of some symptoms (e.g., farting/flatulence vs. bloating) by subjects seems to be more problematic and might be problematic in the English language as well. However, investigation of validity is a concern in general, because standardized instruments for evaluating concurrent validity are not available at present, and the Rome-II criteria themselves require further validation. At present, application of the Gastro-Questionnaire as a diagnostic screening instrument is supported mainly by literal use of the Rome-II symptom items, which also are applied for checklist interviews in clinical research and practice. Because neither a gold standard nor completely symptom-free normal samples exist, exact data on sensitivity and specificity are not available. However, frequencies of major FGDs (like IBS and FD) in the patient sample were about 10- to 20-fold higher than in the general population sample, independent of the symptom definition applied. Because good sensitivity and specificity can be presumed but not determined on the basis of these preliminary findings, further empirical research on external validity of the Gastro-Questionnaire is required.

The factor analysis conducted on the basis of severity aspects of FGSs suggests that IBS is not a homogeneous diagnostic entity but rather falls into two distinct subgroups, characterized by either diarrhea-type or constipation-type symptoms. Furthermore, the dimensions detected confirm somewhat the upper grouping of the Rome criteria, whereas the subdivision into more than 20 spe-

cific FGDs is not supported by our results. This subclassification appears to be overdifferentiated, because psychosomatic treatments require classification along psychological characteristics and severity dimensions, because evidence on different organic etiologies of FGD does not exist, and because separate consideration of more than 20 FGDs is a practical and economical concern in research.

Our findings elucidate the outstanding effect of symptom definition on frequencies of FGDs. Compared with previous epidemiological studies on FGDs and IBS (Drossman et al., 1993; Jones & Lydeard, 1992; Talley et al., 1991), frequencies in our study were substantially lower when we used a more narrow definition of FGS. However, using this restrictive definition seems to yield appropriate frequencies of FGDs, considering that all participants in the patient sample revealed at least one positive FGD diagnosis. In former studies applying broader definitions, it was found that patients with IBS were very heterogeneous regarding psychopathology and health care-seeking behavior. Only about one third of all persons with the diagnosis of IBS and fewer than one of six with FGD had ever consulted a physician (Drossman et al., 1993; Jones & Lydeard, 1992; Talley et al., 1991). Only about 50% of participants with the diagnosis of IBS had elevated levels of psychopathology (Creed & Guthrie, 1987; Toner, Garfinkel & Jeejeebhoy, 1990). Nonconsulters differed very little from healthy participants on psychopathology scores, whereas participants seeking medical care had higher levels of psychopathology than either of the two other groups (Drossman et al., 1988; Heaton et al., 1992; Herschbach et al., 1999; Sandler, Drossman, Nathan, & McKee, 1984; Smith et al., 1990). Consequently, existing prevalence rates for FGD reflect a very large spectrum of severity, ranging from negligible impairment to very serious illness. Using a more narrow concept of FGD may yield more homogeneous sample characteristics.

In a critical review of controlled treatment trials, Talley, Owen, Boyce, and Paterson (1996) emphasize the need to clarify diagnostic criteria and cutoffs for group definition in future studies. However, one principal problem of classification is that FGDs are far from describing diagnostic entities, although some factorial evidence was found for separable subgroups (Talley, Holtman, Agreus, & Jones, 2000; Taub, Cuevas, Cook, Crowell, & Whitehead, 1995; Whitehead et al., 1990). Some FGDs, like functional constipation and IBS, are differentiated exclusively by symptom cutoffs, whereas others like IBS and FD partly overlap or like IBS divide into distinct subgroups. The incompatibility of FGD criteria definition with coexisting classification concepts of functional symptoms in DSM-IV and ICD-10 is another problematic issue. The concepts of FGD and somatoform disorders substantially overlap but are not compatible. FGSs sometimes are combined with functional or somatoform symptoms in other anatomic regions, but their classification as somatoform disorder or FGD is arbitrary in most cases. Patients suffering from severe bowel symptoms compatible with the diagnosis of IBS but also complaining about multiple additional somatoform

symptoms would probably be diagnosed with somatization disorder, which comprises two or more gastrointestinal symptoms. On the other hand, someone suffering from symptoms justifying the diagnosis of undifferentiated somatoform disorder or pain disorder would probably obtain an FGD diagnosis, if symptoms were mainly situated in the bowel. DSM-IV and ICD-10 provide more distinct cutoffs and symptom thresholds, yielding convergent prevalence rates between epidemiological studies and being more appropriate for psychological objectives. However, no appropriate classification category for FGS is available within the concept of somatoform disorders, whereas specific disorders are defined for pain symptoms, pseudoneurological symptoms, and autonomic symptoms (ICD-10). FGSs can be diagnosed only as a part of a somatization disorder, as undifferentiated somatoform disorder, or as somatoform disorder not otherwise specified. Hence, an additional category for FGSs would efficiently complete DSM-IV and ICD-10. Conversely, severity indexes combining symptomatic and psychological aspects are not sufficiently considered in the Rome criteria at present. In the light of these issues, combining the concepts of FGD and somatoform disorders and adjusting them stepwise would be useful. At present, conceptual incompatibility is hindering interdisciplinary research on FGDs and somatization disorder. Introducing a distinct severity criterion as proposed in this study as well as systematic screening for FGSs could be the first steps toward adjusting the concepts of FGD and somatoform disorders.

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APPENDIX

Appendix A:

Subject name or code: _____
 Date: _____

**Gastro-
Questionnaire**

Instruction:

Below you find a list of bodily symptoms, which are related to ingestion, digestion and defecation.

Please indicate, how often you have had each symptom **during the last 12 months** and how much you were distressed by this symptom.

'Frequently' means **more than 25%** of days, **'(nearly) always'** means **at least 75%** of days.

I read the instruction thoroughly and understood its meaning: Yes No

During the last 12 months I have had the following symptoms...

<p>1. Sensation of lump in the throat (independently from meals)</p>	➔	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">How often have you had this symptom?</td> <td style="text-align: center;">not at all</td> <td style="text-align: center;">from time to time</td> <td style="text-align: center;">frequently</td> <td style="text-align: center;">(nearly) always</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>How distressed were you by this ?</td> <td style="text-align: center;">no distress</td> <td style="text-align: center;">mild distress</td> <td style="text-align: center;">intermediate distress</td> <td style="text-align: center;">severe distress</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	How often have you had this symptom?	not at all	from time to time	frequently	(nearly) always		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	How distressed were you by this ?	no distress	mild distress	intermediate distress	severe distress		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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How distressed were you by this ?	no distress	mild distress	intermediate distress	severe distress																		
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<p>2. Regurgitation of food</p>	➔	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">How often have you had this symptom?</td> <td style="text-align: center;">not at all</td> <td style="text-align: center;">from time to time</td> <td style="text-align: center;">frequently</td> <td style="text-align: center;">(nearly) always</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>How distressed were you by this ?</td> <td style="text-align: center;">no distress</td> <td style="text-align: center;">mild distress</td> <td style="text-align: center;">intermediate distress</td> <td style="text-align: center;">severe distress</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	How often have you had this symptom?	not at all	from time to time	frequently	(nearly) always		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	How distressed were you by this ?	no distress	mild distress	intermediate distress	severe distress		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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<p>3. Difficulty swallowing</p>	➔	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">How often have you had this symptom?</td> <td style="text-align: center;">not at all</td> <td style="text-align: center;">from time to time</td> <td style="text-align: center;">frequently</td> <td style="text-align: center;">(nearly) always</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>How distressed were you by this ?</td> <td style="text-align: center;">no distress</td> <td style="text-align: center;">mild distress</td> <td style="text-align: center;">intermediate distress</td> <td style="text-align: center;">severe distress</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	How often have you had this symptom?	not at all	from time to time	frequently	(nearly) always		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	How distressed were you by this ?	no distress	mild distress	intermediate distress	severe distress		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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How distressed were you by this ?	no distress	mild distress	intermediate distress	severe distress																		
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<p>4. Nausea</p>	➔	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">How often have you had this symptom?</td> <td style="text-align: center;">not at all</td> <td style="text-align: center;">from time to time</td> <td style="text-align: center;">frequently</td> <td style="text-align: center;">(nearly) always</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>How distressed were you by this ?</td> <td style="text-align: center;">no distress</td> <td style="text-align: center;">mild distress</td> <td style="text-align: center;">intermediate distress</td> <td style="text-align: center;">severe distress</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	How often have you had this symptom?	not at all	from time to time	frequently	(nearly) always		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	How distressed were you by this ?	no distress	mild distress	intermediate distress	severe distress		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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How distressed were you by this ?	no distress	mild distress	intermediate distress	severe distress																		
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<p>5. Vomiting</p>	➔	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">How often have you had this symptom?</td> <td style="text-align: center;">not at all</td> <td style="text-align: center;">from time to time</td> <td style="text-align: center;">frequently</td> <td style="text-align: center;">(nearly) always</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>How distressed were you by this ?</td> <td style="text-align: center;">no distress</td> <td style="text-align: center;">mild distress</td> <td style="text-align: center;">intermediate distress</td> <td style="text-align: center;">severe distress</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	How often have you had this symptom?	not at all	from time to time	frequently	(nearly) always		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	How distressed were you by this ?	no distress	mild distress	intermediate distress	severe distress		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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<p>6. Heartburn - (changing after meals; relieved by antacids)</p>	➔	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">How often have you had this symptom?</td> <td style="text-align: center;">not at all</td> <td style="text-align: center;">from time to time</td> <td style="text-align: center;">frequently</td> <td style="text-align: center;">(nearly) always</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>How distressed were you by this ?</td> <td style="text-align: center;">no distress</td> <td style="text-align: center;">mild distress</td> <td style="text-align: center;">intermediate distress</td> <td style="text-align: center;">severe distress</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	How often have you had this symptom?	not at all	from time to time	frequently	(nearly) always		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	How distressed were you by this ?	no distress	mild distress	intermediate distress	severe distress		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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How distressed were you by this ?	no distress	mild distress	intermediate distress	severe distress																		
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APPENDIX (CONTINUED)

7. Chest pain	How often have you had this symptom?	not at all <input type="checkbox"/>	from time to time <input type="checkbox"/>	frequently <input type="checkbox"/>	(nearly) always <input type="checkbox"/>	
	How distressed were you by this ?	no distress <input type="checkbox"/>	mild distress <input type="checkbox"/>	intermediate distress <input type="checkbox"/>	severe distress <input type="checkbox"/>	very severe distress <input type="checkbox"/>
8. Intolerance of several foods	How often have you had this symptom?	not at all <input type="checkbox"/>	from time to time <input type="checkbox"/>	frequently <input type="checkbox"/>	(nearly) always <input type="checkbox"/>	
	How distressed were you by this ?	no distress <input type="checkbox"/>	mild distress <input type="checkbox"/>	intermediate distress <input type="checkbox"/>	severe distress <input type="checkbox"/>	very severe distress <input type="checkbox"/>
9. Abdominal fullness	How often have you had this symptom?	not at all <input type="checkbox"/>	from time to time <input type="checkbox"/>	frequently <input type="checkbox"/>	(nearly) always <input type="checkbox"/>	
	How distressed were you by this ?	no distress <input type="checkbox"/>	mild distress <input type="checkbox"/>	intermediate distress <input type="checkbox"/>	severe distress <input type="checkbox"/>	very severe distress <input type="checkbox"/>
10. Abdominal bloating	How often have you had this symptom?	not at all <input type="checkbox"/>	from time to time <input type="checkbox"/>	frequently <input type="checkbox"/>	(nearly) always <input type="checkbox"/>	
	How distressed were you by this ?	no distress <input type="checkbox"/>	mild distress <input type="checkbox"/>	intermediate distress <input type="checkbox"/>	severe distress <input type="checkbox"/>	very severe distress <input type="checkbox"/>
11. Feeling of abdominal distension	How often have you had this symptom?	not at all <input type="checkbox"/>	from time to time <input type="checkbox"/>	frequently <input type="checkbox"/>	(nearly) always <input type="checkbox"/>	
	How distressed were you by this ?	no distress <input type="checkbox"/>	mild distress <input type="checkbox"/>	intermediate distress <input type="checkbox"/>	severe distress <input type="checkbox"/>	very severe distress <input type="checkbox"/>
12. Abdominal pain	How often have you had this symptom?	not at all <input type="checkbox"/>	from time to time <input type="checkbox"/>	frequently <input type="checkbox"/>	(nearly) always <input type="checkbox"/>	
	How distressed were you by this ?	no distress <input type="checkbox"/>	mild distress <input type="checkbox"/>	intermediate distress <input type="checkbox"/>	severe distress <input type="checkbox"/>	very severe distress <input type="checkbox"/>
	<i>a) if present:</i> Is abdominal pain associated with food intake?	not at all <input type="checkbox"/>	from time to time <input type="checkbox"/>	frequently <input type="checkbox"/>	(nearly) always <input type="checkbox"/>	
	<i>b) if present:</i> Is abdominal pain relieved by antacids?	not at all <input type="checkbox"/>	from time to time <input type="checkbox"/>	frequently <input type="checkbox"/>	(nearly) always <input type="checkbox"/>	
	<i>c) if present:</i> Is abdominal pain relieved by defecation or associated with changes in stool form?	not at all <input type="checkbox"/>	from time to time <input type="checkbox"/>	frequently <input type="checkbox"/>	(nearly) always <input type="checkbox"/>	
13. Bowel noises	How often have you had this symptom?	not at all <input type="checkbox"/>	from time to time <input type="checkbox"/>	frequently <input type="checkbox"/>	(nearly) always <input type="checkbox"/>	
	How distressed were you by this ?	no distress <input type="checkbox"/>	mild distress <input type="checkbox"/>	intermediate distress <input type="checkbox"/>	severe distress <input type="checkbox"/>	very severe distress <input type="checkbox"/>

APPENDIX (CONTINUED)

<p>14. Stools very often (> 3 defecations daily)</p>	<p>➔</p>	<table border="1"> <tbody> <tr> <td> <p>How often have you had this symptom?</p> </td> <td> <p>not at all <input type="checkbox"/></p> </td> <td> <p>from time to time <input type="checkbox"/></p> </td> <td> <p>frequently <input type="checkbox"/></p> </td> <td> <p>(nearly) always <input type="checkbox"/></p> </td> </tr> <tr> <td> <p>How distressed were you by this ?</p> </td> <td> <p>no distress <input type="checkbox"/></p> </td> <td> <p>mild distress <input type="checkbox"/></p> </td> <td> <p>intermediate distress <input type="checkbox"/></p> </td> <td> <p>severe distress <input type="checkbox"/></p> </td> </tr> </tbody> </table>	<p>How often have you had this symptom?</p>	<p>not at all <input type="checkbox"/></p>	<p>from time to time <input type="checkbox"/></p>	<p>frequently <input type="checkbox"/></p>	<p>(nearly) always <input type="checkbox"/></p>	<p>How distressed were you by this ?</p>	<p>no distress <input type="checkbox"/></p>	<p>mild distress <input type="checkbox"/></p>	<p>intermediate distress <input type="checkbox"/></p>	<p>severe distress <input type="checkbox"/></p>
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<p>How distressed were you by this ?</p>	<p>no distress <input type="checkbox"/></p>	<p>mild distress <input type="checkbox"/></p>	<p>intermediate distress <input type="checkbox"/></p>	<p>severe distress <input type="checkbox"/></p>								
<p>15. Stools very rarely (< 3 defecations per week)</p>	<p>➔</p>	<table border="1"> <tbody> <tr> <td> <p>How often have you had this symptom?</p> </td> <td> <p>not at all <input type="checkbox"/></p> </td> <td> <p>from time to time <input type="checkbox"/></p> </td> <td> <p>frequently <input type="checkbox"/></p> </td> <td> <p>(nearly) always <input type="checkbox"/></p> </td> </tr> <tr> <td> <p>How distressed were you by this ?</p> </td> <td> <p>no distress <input type="checkbox"/></p> </td> <td> <p>mild distress <input type="checkbox"/></p> </td> <td> <p>intermediate distress <input type="checkbox"/></p> </td> <td> <p>severe distress <input type="checkbox"/></p> </td> </tr> </tbody> </table>	<p>How often have you had this symptom?</p>	<p>not at all <input type="checkbox"/></p>	<p>from time to time <input type="checkbox"/></p>	<p>frequently <input type="checkbox"/></p>	<p>(nearly) always <input type="checkbox"/></p>	<p>How distressed were you by this ?</p>	<p>no distress <input type="checkbox"/></p>	<p>mild distress <input type="checkbox"/></p>	<p>intermediate distress <input type="checkbox"/></p>	<p>severe distress <input type="checkbox"/></p>
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<p>16. Stool urgency</p>	<p>➔</p>	<table border="1"> <tbody> <tr> <td> <p>How often have you had this symptom?</p> </td> <td> <p>not at all <input type="checkbox"/></p> </td> <td> <p>from time to time <input type="checkbox"/></p> </td> <td> <p>frequently <input type="checkbox"/></p> </td> <td> <p>(nearly) always <input type="checkbox"/></p> </td> </tr> <tr> <td> <p>How distressed were you by this ?</p> </td> <td> <p>no distress <input type="checkbox"/></p> </td> <td> <p>mild distress <input type="checkbox"/></p> </td> <td> <p>intermediate distress <input type="checkbox"/></p> </td> <td> <p>severe distress <input type="checkbox"/></p> </td> </tr> </tbody> </table>	<p>How often have you had this symptom?</p>	<p>not at all <input type="checkbox"/></p>	<p>from time to time <input type="checkbox"/></p>	<p>frequently <input type="checkbox"/></p>	<p>(nearly) always <input type="checkbox"/></p>	<p>How distressed were you by this ?</p>	<p>no distress <input type="checkbox"/></p>	<p>mild distress <input type="checkbox"/></p>	<p>intermediate distress <input type="checkbox"/></p>	<p>severe distress <input type="checkbox"/></p>
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<p>17. Faecal soiling</p>	<p>➔</p>	<table border="1"> <tbody> <tr> <td> <p>How often have you had this symptom?</p> </td> <td> <p>not at all <input type="checkbox"/></p> </td> <td> <p>from time to time <input type="checkbox"/></p> </td> <td> <p>frequently <input type="checkbox"/></p> </td> <td> <p>(nearly) always <input type="checkbox"/></p> </td> </tr> <tr> <td> <p>How distressed were you by this ?</p> </td> <td> <p>no distress <input type="checkbox"/></p> </td> <td> <p>mild distress <input type="checkbox"/></p> </td> <td> <p>intermediate distress <input type="checkbox"/></p> </td> <td> <p>severe distress <input type="checkbox"/></p> </td> </tr> </tbody> </table>	<p>How often have you had this symptom?</p>	<p>not at all <input type="checkbox"/></p>	<p>from time to time <input type="checkbox"/></p>	<p>frequently <input type="checkbox"/></p>	<p>(nearly) always <input type="checkbox"/></p>	<p>How distressed were you by this ?</p>	<p>no distress <input type="checkbox"/></p>	<p>mild distress <input type="checkbox"/></p>	<p>intermediate distress <input type="checkbox"/></p>	<p>severe distress <input type="checkbox"/></p>
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<p>18. Frequent changing of stool consistency</p>	<p>➔</p>	<table border="1"> <tbody> <tr> <td> <p>How often have you had this symptom?</p> </td> <td> <p>not at all <input type="checkbox"/></p> </td> <td> <p>from time to time <input type="checkbox"/></p> </td> <td> <p>frequently <input type="checkbox"/></p> </td> <td> <p>(nearly) always <input type="checkbox"/></p> </td> </tr> <tr> <td> <p>How distressed were you by this ?</p> </td> <td> <p>no distress <input type="checkbox"/></p> </td> <td> <p>mild distress <input type="checkbox"/></p> </td> <td> <p>intermediate distress <input type="checkbox"/></p> </td> <td> <p>severe distress <input type="checkbox"/></p> </td> </tr> </tbody> </table>	<p>How often have you had this symptom?</p>	<p>not at all <input type="checkbox"/></p>	<p>from time to time <input type="checkbox"/></p>	<p>frequently <input type="checkbox"/></p>	<p>(nearly) always <input type="checkbox"/></p>	<p>How distressed were you by this ?</p>	<p>no distress <input type="checkbox"/></p>	<p>mild distress <input type="checkbox"/></p>	<p>intermediate distress <input type="checkbox"/></p>	<p>severe distress <input type="checkbox"/></p>
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<p>19. Loose or watery stools</p>	<p>➔</p>	<table border="1"> <tbody> <tr> <td> <p>How often have you had this symptom?</p> </td> <td> <p>not at all <input type="checkbox"/></p> </td> <td> <p>from time to time <input type="checkbox"/></p> </td> <td> <p>frequently <input type="checkbox"/></p> </td> <td> <p>(nearly) always <input type="checkbox"/></p> </td> </tr> <tr> <td> <p>How distressed were you by this ?</p> </td> <td> <p>no distress <input type="checkbox"/></p> </td> <td> <p>mild distress <input type="checkbox"/></p> </td> <td> <p>intermediate distress <input type="checkbox"/></p> </td> <td> <p>severe distress <input type="checkbox"/></p> </td> </tr> </tbody> </table>	<p>How often have you had this symptom?</p>	<p>not at all <input type="checkbox"/></p>	<p>from time to time <input type="checkbox"/></p>	<p>frequently <input type="checkbox"/></p>	<p>(nearly) always <input type="checkbox"/></p>	<p>How distressed were you by this ?</p>	<p>no distress <input type="checkbox"/></p>	<p>mild distress <input type="checkbox"/></p>	<p>intermediate distress <input type="checkbox"/></p>	<p>severe distress <input type="checkbox"/></p>
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<p>20. Hard or lumpy stools</p>	<p>➔</p>	<table border="1"> <tbody> <tr> <td> <p>How often have you had this symptom?</p> </td> <td> <p>not at all <input type="checkbox"/></p> </td> <td> <p>from time to time <input type="checkbox"/></p> </td> <td> <p>frequently <input type="checkbox"/></p> </td> <td> <p>(nearly) always <input type="checkbox"/></p> </td> </tr> <tr> <td> <p>How distressed were you by this ?</p> </td> <td> <p>no distress <input type="checkbox"/></p> </td> <td> <p>mild distress <input type="checkbox"/></p> </td> <td> <p>intermediate distress <input type="checkbox"/></p> </td> <td> <p>severe distress <input type="checkbox"/></p> </td> </tr> </tbody> </table>	<p>How often have you had this symptom?</p>	<p>not at all <input type="checkbox"/></p>	<p>from time to time <input type="checkbox"/></p>	<p>frequently <input type="checkbox"/></p>	<p>(nearly) always <input type="checkbox"/></p>	<p>How distressed were you by this ?</p>	<p>no distress <input type="checkbox"/></p>	<p>mild distress <input type="checkbox"/></p>	<p>intermediate distress <input type="checkbox"/></p>	<p>severe distress <input type="checkbox"/></p>
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<p>21. Straining during a bowel movement</p>	<p>➔</p>	<table border="1"> <tbody> <tr> <td> <p>How often have you had this symptom?</p> </td> <td> <p>not at all <input type="checkbox"/></p> </td> <td> <p>from time to time <input type="checkbox"/></p> </td> <td> <p>frequently <input type="checkbox"/></p> </td> <td> <p>(nearly) always <input type="checkbox"/></p> </td> </tr> <tr> <td> <p>How distressed were you by this ?</p> </td> <td> <p>no distress <input type="checkbox"/></p> </td> <td> <p>mild distress <input type="checkbox"/></p> </td> <td> <p>intermediate distress <input type="checkbox"/></p> </td> <td> <p>severe distress <input type="checkbox"/></p> </td> </tr> </tbody> </table>	<p>How often have you had this symptom?</p>	<p>not at all <input type="checkbox"/></p>	<p>from time to time <input type="checkbox"/></p>	<p>frequently <input type="checkbox"/></p>	<p>(nearly) always <input type="checkbox"/></p>	<p>How distressed were you by this ?</p>	<p>no distress <input type="checkbox"/></p>	<p>mild distress <input type="checkbox"/></p>	<p>intermediate distress <input type="checkbox"/></p>	<p>severe distress <input type="checkbox"/></p>
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