

## **Incongruence between clinicians' assessment and self-reported functioning is related with psychopathology among patients diagnosed with gastrointestinal disorders**

*Running head: Incongruence between clinicians' assessment and patients' self-reported functioning among gastrointestinal patients*

Rodriguez-Urrutia A.<sup>1,2</sup>, Eiroa-Orosa F.J.<sup>3</sup>, Accarino A.<sup>4,5</sup>, Malagelada C<sup>4</sup>, Azpiroz F.<sup>4,5</sup>

1. Consultation-Liaison Psychiatry Unit. Department of Psychiatry, University Hospital Vall d'Hebron, CIBERSAM, Universitat Autònoma de Barcelona, Barcelona, Spain.
2. Department of Psychiatry and Legal Medicine, Universitat Autònoma de Barcelona, Bellaterra (Cerdanyola del Vallès), Spain.
3. School of Psychology. University of East London
4. Digestive System Research Unit, University Hospital Vall d'Hebron, CIBEREHD, Barcelona, Spain
5. Departament of Medicine, Universitat Autònoma de Barcelona, Bellaterra (Cerdanyola del Vallès), Spain

### **Corresponding author**

Amanda Rodriguez-Urrutia, M.D.  
Consultation-Liaison Psychiatry Unit  
Department of Psychiatry, Hospital Universitari Vall d'Hebron, CIBERSAM  
Universitat Autònoma de Barcelona  
Pg. de la Vall d'Hebron, 119-129  
08035 Barcelona (Spain)  
Email: [amarodriguez@vhebron.net](mailto:amarodriguez@vhebron.net)

In a previous exploratory study we observed no relevant differences in psychopathology, personality, and functioning between inpatients diagnosed with gastrointestinal motor disorders (GMDs) or functional gastrointestinal disorders (FGDs) [1]. However, we observed higher levels of incongruence between clinician-assessed performance status and patients' self-reported levels of functioning among patients diagnosed with FGDs. Likewise, research in other medical conditions has shown incongruences between self-reported and clinician-reported or objective measures [2]. Furthermore, in a study on chronic depression, the authors found that discrepancies between patients' and physicians' assessments of medical comorbidities were related to higher levels of depressive symptomatology [3]. In this line, the aim of this study was to explore whether the inconsistencies between clinician-assessed and patient self-reported levels of functioning could be related to psychopathology among patients admitted for evaluation of gastrointestinal motility.

Patients with chronic, severe and unexplained gastrointestinal symptoms admitted to a highly specialised digestive unit of a public university hospital, were included in the study after exclusion of organic lesions and mechanical obstruction by a thorough work-up. The protocol of the study had been approved by the Institutional Ethics Committee and all participants gave their written informed consent.

All patients underwent body mass index (BMI) measurement, evaluation of small bowel motility by manometry, Rome III criteria, and psychiatric assessment. Patients with suspected gastroparesis underwent a scintigraphic gastric emptying test. The Karnofsky Performance Status, KPS [4], was used by gastroenterologists to assess levels of

functioning. This clinician-administered scale covers a range running from 0 (death) to 100 (full level of functioning).

In the first 72 hours after hospital admission, psychiatric assessment covering main psychopathological domains according to DSM-IV-TR [5] was performed, and a battery of psychometric tests was administered. The battery of self-administered questionnaires included perceived levels of functioning (assessed with the Short Form Health Survey, **SF-36** [6]) and psychopathology (using the multidimensional Revised version of the Symptom Checklist, **SCL-90R** [7]).

During the study period, one hundred nineteen patients were enrolled. Eight patients were excluded after assessment, as they did not meet criteria for GMDs or FGDs. Among the one hundred eleven patients included, eight were not able to fill the psychometric tests given their delicate medical situation, and were also excluded from the study.

According to the manometric assessment, twenty-one patients fulfilled criteria for intestinal dysmotility. They presented either a) relapsing acute episodes of intestinal pseudo-obstruction with radiological evidence of intestinal air fluid levels interspersed with relatively symptom-free intervals (n=15), or b) chronic (>6 months) postprandial symptoms such as nausea, vomiting, poorly satiation, postprandial fullness, abdominal discomfort/pain or distension (n=6), with reduced feeding tolerance and inability to maintain normal body weight, i.e. Body Mass Index (BMI) below 18.7 in women and 20.1 in men. Among these patients, 12 fulfilled criteria for Irritable Bowel Syndrome

(IBS) as a secondary diagnosis. The latter exhibited acute episodes of intestinal pseudoobstruction without symptoms in between.

Twenty-nine patients presented clinical features compatible with gastroparesis (3 of them had also fulfilled criteria for intestinal dysmotility). These patients presented early satiation, postprandial fullness, epigastric discomfort/pain and all fulfilled Rome III criteria for functional dyspepsia. In all of them gastroparesis was ruled out by evaluation of gastric motor function (scintigraphic gastric emptying test). Finally, twenty-two of them received a primary diagnosis of functional dyspepsia and 7 of gastroparesis. From the 56 remaining patients, 39 presented recurrent abdominal pain or discomfort with constipation, diarrhoea or both, fulfilling Rome III criteria for IBS. The remaining seventeen presented persistent or recurrent regurgitation of recently ingested food into the mouth, fulfilling criteria for Rumination Syndrome. Finally, 25 patients were primarily diagnosed with GMDs (Dysmotility=18, Gastroparesis=7) and 78 with FGDs (Dyspepsia=22, IBS=39, Rumination=17).

For this study we defined incongruence as the difference between KPS and the SF-36 physical functioning subscale scores (both ranging 0-100). Scores close to 0 would mean absolute congruence between clinician's and patient's perception of functioning; negative scores, higher perception of the patient; and positive, the opposite.

SCL-90R scores were on average half standard deviation above the local population mean. As in our pilot study [1], differences between GMDs and FGDs in SCL-90R scores, duration of illness and BMI, did not yield statistical significant differences.

However, we found a statistically significant difference in KPS scores (GMDs:  $66 \pm 18$  vs. FGDs:  $75 \pm 13$ ;  $t=2.9$ ,  $p<.005$ ). Spearman's Rho correlations between the SCL-90 subscales and incongruence (table 1), were statistically significant for age and all psychopathological measures, with effect sizes ranging from .2 to .4. When these correlations were stratified by diagnostic group, we found that only somatization remained statistically significant in the case of GMDs (but did not remain statistically significant when we excluded the "nausea or upset stomach" item), while all variables except age remained statistically significant for FGDs with increased effect sizes for all SCL-90 subscales except somatisation (whose effect size increased slightly when excluding nausea). Analyses of covariance (IV: diagnostic group, DV: psychopathology dimensions, Covariate: incongruence) showed no statistically significant differences in psychopathology levels between gastroenterological diagnostic groups when controlling for incongruence. We conducted an exploration of physical comorbidities among patients showing both high incongruence and somatization, finding severe illnesses in the GMDs group (including diabetes mellitus, lung transplantation, mitochondrial neurogastrointestinal encephalopathy disease, and cirrhosis), while the FGDs group showed less severe disorders such as fibromyalgia and pelvic inflammatory disease.

This is the first study showing how the incongruence between clinician-assessed and patient self-reported levels of functioning is related to higher psychopathology among patients admitted for evaluation of gastrointestinal motor function. As it could be seen, somatization showed statistically significant correlations with incongruence in both diagnostic groups (this interaction seems to be related to severe medical conditions just in

the GMDs group), while the remaining psychopathological domains correlated with incongruence to a greater extent in the FGDs group.

Psychopathology seems to co-occur with a different view of functioning by clinicians and patients. Relatedly, it has been reported that gastroenterologists tend to misattribute FGDs diagnoses among patients with psychopathology, highlighting a need for improved psychosocial assessment in gastroenterological practice [8]. The concept of illness behaviour may help to understand the complex interactions that patients and doctors have in relation to gastrointestinal disorders, helping practitioners to develop an integrated vision of these patients [9].

This study had several limitations related to its design and methods. The research was conducted in a tertiary care setting, including exclusively inpatients, currently suffering from severe gastrointestinal symptoms. The instruments used in this study are not specially adapted to the characteristics of digestive patients. However, the use of universal instruments, like the SCL-90, SF-36 or KPS, allowed us to compare different types of digestive patients with a highly different range of symptoms. Furthermore, the nature of the SCL-90 scale doesn't allow us to deepen in theoretical explanations about the origin of somatizations or its differentiation from physical comorbidities. Future research with more accurate and specific tools is needed. The Diagnostic Criteria for Psychosomatic Research (DCPR), could be a way of improving psychosomatic and psychosocial evaluation in medical settings [10].

In this study we have seen how the presence of incongruence between patients' and clinician-provided levels of functioning could be a better proxy for psychopathology than having received a functional or a motor gastrointestinal disorder diagnosis. These results highlight the importance of considering the contrasts between subjective and clinical evaluations in digestive patients.

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Table 1. Correlation of the incongruence index with psychopathology

SCL90-R	Total	GMD	FGD
Somatization	.404***	.394*	.380***
Somatization excluding digestive item‡	.411***	.361	.400***
Obsessive-compulsive	.351***	.259	.383***
Interpersonal sensitivity	.287**	.069	.393***
Anxiety	.216*	.206	.272*
Depression	.318**	.249	.423***
Hostility	.207*	.003	.282*
Phobic anxiety	.260**	-.113	.407***
Psychoticism	.300**	.104	.401***
Paranoid ideation	.271**	.050	.361***

Incongruence: difference between KPS and the SF-36 physical functioning subscale scores (both with a range of 0-100). Scores close to 0 mean absolute congruence between clinician's and patient's perception of functioning; negative scores, higher perception of the patient; and positive, the opposite.

GMD: Gastrointestinal Motor Disorders, FGD: Functional Gastrointestinal Disorders

‡ Excluding item 40: "nausea or upset stomach", \* p<.05, \*\* p<.01, \*\*\* p<.001