

Gastrointestinal Symptoms in Psychiatry: Comparison of Direct Applications and Referrals

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ABSTRACT

Gastrointestinal symptoms in psychiatry: comparison of direct applications and referrals

Objective: Clinical experience and observations suggest that there are some discrepancies between patients who directly apply to psychiatry clinic, and who are referred from gastroenterology clinic to psychiatry clinic. Thus, we aimed to investigate differences related to the demographic and clinical characteristics of these patients.

Method: The study included 115 consecutive patients aged between 18-65 years. Sixty-one of the patients applied directly to the psychiatry clinic, and 54 patients were referred for consultation to the psychiatry clinic. Primary gastrointestinal complaints, psychiatric diagnoses and personality features were recorded on the sociodemographic data form, and the severity of psychiatric disorders were assessed by the Clinical Global Impression Scale - Severity Subscale.

Results: Patients who directly applied to psychiatry clinic were more likely to be female, older, and married. They attributed their gastrointestinal symptoms also more likely to be of psychogenic origin. Patients who directly applied to psychiatry clinic suffered more likely from a sense of fullness/abdominal tension, while patients who were referred to psychiatry clinic more frequently complained of bloating, abdominal pain, and constipation. Patients who directly applied to psychiatry clinic were more frequently diagnosed with depressive disorders, trauma related disorders, and personality disorders, whereas referrals were more frequently diagnosed with psychotic disorders. Directly admitted patients were also more likely to exhibit impulsivity as a personality feature.

Conclusion: Patients with gastrointestinal symptoms who directly presented to psychiatry differed from those who were referred from gastroenterology clinics on some of their demographic aspects, primary psychiatric diagnoses and personality traits.

Keywords: Consultation liaison psychiatry, gastrointestinal symptoms, psychiatric diagnosis

ÖZET

Psikiyatride gastrointestinal belirtiler: Direkt başvurular ile refere edilen olguların karşılaştırması

Amaç: Klinik deneyim ve gözlemler psikiyatride direkt başvuran hastalar ile gastroenteroloji kliniğinden refere edilen hastalar arasında bazı tutarsızlıklar bulunduğunu göstermiştir. Bu yüzden, çalışmamızda bu hastaların demografik ve klinik özellikleri ile ilgili farklılıkları araştırmayı hedefledik.

Yöntem: Çalışmaya ardışık olarak yaşları 18-64 arası olan 115 hasta alınmıştır. Bu hastaların 61'i direkt olarak başvurmuş, 54'ü konsültasyon istenerek refere edilmiştir. Primer gastrointestinal şikayetler, psikiyatrik tanıları ve kişilik özellikleri sosyodemografik veri formuna kayıt edilmiş, psikiyatrik bozuklukların şiddeti Klinik Global İzlenim Ölçeği - Şiddet Alt Ölçeği ile değerlendirilmiştir.

Bulgular: Psikiyatride direkt olarak başvuran hastaların çoğu kadın, daha yaşlı, evli hastalardı ve gastrointestinal belirtilerinin daha ziyade psikolojik kökenli olduğunu belirtmişlerdir. Direkt olarak psikiyatride başvuran hastalar daha ziyade karında doluluk/abdominal gerginlikten yakınırken, refere edilmiş olan hastalar daha sık olarak gaz, abdominal ağrı ve kabızlıktan şikayet etmekteydi. Direkt başvurularda daha ziyade depresif bozukluklar, travma ile ilişkili bozukluklar ve kişilik bozuklukları ile ilgili tanı konmuşken, refere edilenlerde daha sıklıkla psikotik bozukluklar tanısı konmuştur. Direkt olarak başvuran hastalar aynı zamanda kişilik özelliği olarak daha fazla impulsivite göstermiştir.

Sonuç: Gastrointestinal belirtileri olan ve psikiyatride doğrudan başvuran hastalar kimi demografik yönleri, birincil psikiyatrik tanıları ve kişilik özellikleri açısından gastroenteroloji kliniklerinden yönlendirilenlerden farklılaşmaktadır.

Anahtar kelimeler: Konsültasyon liyezon psikiyatrisi, gastrointestinal semptomlar, psikiyatrik tanı

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INTRODUCTION

Gastrointestinal (GI) symptoms can be related to pharynx, esophagus, stomach, biliary tract, intestines, or anorectum. They usually occur as chronic or recurrent complaints, and are extremely common in general population (1). In primary care settings, it has been reported that nearly 18% of all patients complain of at least one GI symptom (2), and population studies have even shown a prevalence up to 48% (3). The presence of GI symptoms are associated with functional impairment in daily life due to clinical visits, disability, and a worsening in the quality of life (2). Individuals with GI symptoms are at increased risk for depressive and anxiety disorders, e.g. agoraphobia, and panic disorder (3).

When chronic and recurrent symptoms associated with the GI system cannot be explained by structural or biochemical causes, a diagnosis of functional GI disorder (FGID) can be made (4). FGIDs are very common. Population studies report prevalence rates between 10 and 35% (5,6). These disorders are a major part of clinical practice for both primary care physicians and gastroenterologists. Approximately half of the patients complaining of GI symptoms have FGIDs in primary care settings, and one third to half of all referrals to gastroenterologists are diagnosed with FGIDs (7,8). FGIDs are associated with well documented negative social impacts, e.g. absenteeism from work, impaired health related quality of life, and increased medical costs (9).

In spite of its high prevalence, the majority of patients with FGIDs do not seek care (10,11), but the number of consultations are high in some countries (12). Whereas some studies have indicated that psychological distress, abnormal personality traits, and psychiatric disorders are associated with healthcare seeking behavior (13,14), some other studies showed no relationship with psychological factors in this context (12,15).

Psychiatric and GI symptoms affect each other, i.e. patients with psychiatric symptoms have more severe GI complaints (3,16). Furthermore, patients with medically unexplained GI symptoms have higher

lifetime rates of psychiatric diagnoses, e.g. depression, anxiety, phobia, dissociation, and a history of childhood sexual abuse compared to those without GI symptoms (17-19). It has been suggested that, in cases with medically unexplained, persistent or multiple somatic symptoms, clinicians should suspect about a comorbid, and potentially treatable depressive or anxiety disorder (20).

Many patients present with individual somatic symptoms such as GI complaints to psychiatry clinics (20), and they may be referred for psychiatric evaluation after a thorough medical investigation. There is limited data about psychiatric evaluation of patients who were referred by gastroenterologists. In one small prospective study of this kind, there was a female preponderance, and major depression and generalized anxiety disorder (GAD) were the most encountered psychiatric diagnoses. Other diagnoses included panic disorder, drug abuse, delirium, phobias, schizophrenia, mania, and mental retardation (21).

There are many reports assessing the relationship between GI symptoms and psychiatric disorders in the literature. Yet, only a small number of studies seem to have focused on the different patient characteristics between directly presenting patients and referrals. Since clinical experience and observations suggested that there were some discrepancies between these two groups, we aimed to investigate whether there were any differences regarding the demographic and clinical characteristics of these patients.

METHOD

Study sample consisted of 115 consecutive patients with GI symptoms, who were aged between 18-65 years and either applied directly or were referred from gastroenterology clinics to psychiatry outpatient clinic between dates January 2014 and June 2014 of a general hospital. Sixty-one of the patients applied directly, and 54 patients were referred for consultation. Patients with significant cognitive impairments (e.g., dementia, mental retardation) were excluded. GI symptoms were defined as subjective GI distress experienced by the

patients. Patients were interviewed by experienced psychiatrists according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (22), and demographic and clinical variables were obtained from the medical records or through purpose designed questions.

Ethics Statement

The research protocol was approved by the local Clinical Research Ethics Committee, and the study was conducted in accordance with the Helsinki Declaration. After complete description of the study to the patients, written informed consent was obtained.

Measures

Demographic and Clinical Characteristics

Demographic variables included age, gender, marital status, and education level. Clinical variables included invasive diagnostic procedures (present vs. absent), need for additional medical consultation (present vs. absent), somatic comorbidity (present vs. absent), prescription of drugs to alleviate GI symptoms (present vs. absent), and GI symptom attribution (somatic vs. psychogenic). In addition, primary GI complaints (indigestion, bloating, sense of fullness / abdominal tension, abdominal pain, nausea, vomiting, epigastric burning sensation, gastro-esophageal reflux (GER), constipation, diarrhea), psychiatric diagnoses (depressive disorders, anxiety disorders, somatoform disorders, psychotic disorders, dissociative disorders, obsessive compulsive disorder, trauma related disorders, personality disorders), the severity of psychiatric disorder (Clinical Global Impression Scale - Severity Subscale (CGI-S) score), and personality features (extraversion, neuroticism, impulsivity) were collected. GI complaints were recorded according to patients' self-reports. Patients were diagnosed by a semi-structured clinical interview performed by experienced psychiatrists, and clinicians used their clinical judgement to conclude about personality features that participants exhibited.

Severity of Psychiatric Disorders

The Clinical Global Impression- Severity Scale (CGI-S) (23,24) a 7-point Likert type well established research rating tool applicable to all psychiatric disorders, was used by the interviewers to rate the severity of psychiatric diagnoses at the time of assessment. It can be used in busy practices within a limited time frame to assess the severity of disorders by clinicians, and the interviewers decided how to rate the severity according to their past experiences with patients who suffered from the same diagnoses (25). The severity of mental disorders at the time of the assessment was rated as 1, normal, not at all ill; 2, borderline mentally ill; 3, mildly ill; 4, moderately ill; 5, markedly ill; 6, severely ill; or 7, extremely ill. The CGI-S score obtained during the assessment was used in the statistical analyses. For the present study, the Turkish version of the CGI-S was used (26).

Statistical Analyses

The patient groups were compared on demographic and clinical characteristics with Pearson χ^2 -square, or Fisher's exact test, for categorical variables, and independent samples t test for continuous variables. Odds ratios (OR) were computed for the referred patient group within a 95% confidence interval (CI). The level of significance was accepted as $p < 0.05$. Analyses were performed using SPSS 17.0 for Windows (SPSS Inc., Chicago, IL, USA).

RESULTS

Demographic and Clinical Characteristics of the Patients

Patients who directly presented to psychiatry were more likely to be female, older, and married. They also more likely attributed their GI symptoms to have a psychological origin (OR=2.430, C=1.739-3.395). Patients who were referred from gastroenterology clinics were more likely to have undergone invasive diagnostic tests, and have been prescribed

medications for GI symptom alleviation (OR=3.150, CI=1.971-5.034). Patients in the referral group were more frequently prescribed anti-acids (OR=1.828, CI=1.285-2.599), and anti-histaminergic drugs (OR=2.431, CI=1.767-3.295), but not proton pump inhibitors. The groups did not statistically significantly differ from each other in terms of education level, somatic comorbidity, and the need for additional medical consultations. These results are summarized in Table 1.

Gastrointestinal Symptoms

The groups differed statistically significantly from each other in terms of their primary GI complaints. Patients who directly applied to psychiatry clinic

suffered more likely from a sense of fullness/abdominal tension (OR=1.434, CI=1.020-2.018), while patients who were referred more frequently complained of bloating (OR=1.674, CI=1.078-2.600), abdominal pain (OR=3.761, CI=2.105-6.721), and constipation (OR=2.298, CI=1.854-2.849). These results are presented in Table 2.

Psychiatric Profile of the Patients

Also the groups differed statistically significantly in their psychiatric diagnoses. Direct applications were more frequently diagnosed with depressive disorders (OR=1.802, CI=1.249-2.600), trauma related disorders (OR=1.605, CI=1.164-2.213), and personality disorders (OR=2.174, CI=1.758-2.688), whereas referrals were

Table 1: Demographic and clinical data of the participants

	Direct Applications (n=61)		Referrals (n=54)		t (df)	p
	Mean	SD	Mean	SD		
Age	46.00	16.51	38.67	16.51	2.377 (113)	0.019
	n	%	n	%	χ^2 (df)	p
Gender, female	48	78.7	25	46.3	12.964 (1)	<0.001
Level of education, \geq 8 years	43	70.5	38	70.4	0.000 (1)	0.989
Marital status, married	53	86.9	36	66.7	6.692 (1)	0.010
Invasive diagnostic tests, present	11	18.0	54	100.0	78.310 (1)	<0.001
Prescription for GI symptom alleviation, present	13	21.3	39	72.2	29.971 (1)	<0.001
Need for additional consultation, present	13	21.3	19	35.2	2.745 (1)	0.098
Somatic comorbidity, present	32	52.5	20	37.0	2.750 (1)	0.097
Symptom attribution, psychogenic	35	57.4	6	11.1	26.726 (1)	<0.001

GI: gastrointestinal, n: number, SD: Standard deviation

Table 2: Primary gastrointestinal complaints of the groups

	Direct Applications (n=61)		Referrals (n=54)		χ^2 (df)	p
	n	%	n	%		
Indigestion	52	85.2	46	85.2	<0.001 (1)	0.993
Bloating	28	45.9	37	68.5	5.962 (1)	0.015
Sense of fullness / abdominal tension	32	52.5	18	33.3	4.264 (1)	0.039
Abdominal pain	18	29.5	44	81.5	31.140 (1)	< 0.001
Nausea	18	29.5	14	25.9	0.183 (1)	0.669
Vomiting	4	6.6	10	18.5	3.833 (1)	0.050*
Epigastric burning sensation	17	27.9	24	44.4	3.430 (1)	0.064
GER	2	3.3	2	3.7	0.015 (1)	0.901*
Constipation	0	0	7	13.0	8.420 (1)	0.004*
Diarrhea	2	3.3	7	13.0	3.724 (1)	0.081*

*Fisher's exact test, GER: gastroesophageal reflux, n: number

Table 3: Psychiatric profile of the groups

	Direct applications (n=61)		Referrals (n=54)		t (df)	p
	Mean	SD	Mean	SD		
CGI-S	4.33	0.91	4.28	0.92	0.294 (113)	0.770
	n	%	n	%	χ^2 (df)	p
Depressive disorders	38	62.3	17	31.5	10.899 (1)	0.001
Anxiety disorders	43	70.5	38	70.4	0.000 (1)	0.989
Somatoform disorders	20	32.8	14	25.9	0.674 (1)	0.421
Psychotic disorders	0	0	6	11.1	7.151 (1)	0.007*
Dissociative disorders	8	13.1	6	11.1	0.108 (1)	0.743
OCD	0	0	2	3.7	2.299 (1)	0.218*
Trauma related disorders	14	23.0	4	7.4	5.242 (1)	0.022*
Personality disorders	15	24.6	0	0	15.270 (1)	<0.001*
Extraversion	5	8.2	4	7.4	0.025 (1)	0.875*
Neuroticism	57	93.4	48	88.9	0.748 (1)	0.512
Impulsivity	19	31.1	6	11.1	6.759 (1)	0.009

*Fisher's exact test, CGI-S: Clinical Global Impression- Severity Scale, n: number, OCD: obsessive compulsive disorder, SD: standard deviation

more frequently diagnosed with psychotic disorders (OR=2.271, CI=1.838-2.806). Directly applied patients were also more likely to exhibit impulsivity as a personality feature (OR=1.629, CI=1.192-2.225), but not extraversion, or neuroticism. The groups did not differ from each other in terms of clinical severity. These results are shown in Table 3.

DISCUSSION

In the present study, we aimed to investigate demographic, and clinical characteristics of patients with GI symptoms who applied directly to psychiatry outpatient clinics, or referred from a gastroenterology outpatient clinic. Our results showed that patients who applied directly to psychiatry (DP group) were more likely to be female, older, and married, and they attributed their GI symptoms to a psychological origin. On the other hand, referrals from gastroenterology (RG group) were more likely to have undergone invasive diagnostic tests, and to have been prescribed medications for GI symptoms, as expected. In terms of GI symptoms, a sense of fullness/abdominal tension was reported more frequently in the DP group, while bloating, abdominal pain, and constipation were more frequently reported in the RG group. With regard to psychiatric diagnoses, depressive disorders, trauma

related disorders, and personality disorders were more likely to be encountered in the DP group, while psychotic disorders were more likely to be diagnosed in the RG group. Regarding personality traits, the RG group was more likely to exhibit impulsivity.

The DP group, compared to the RG group, more likely attributed their GI symptoms to a psychological origin. Evidently, the decision to consult a doctor is known to be influenced by attributions to somatic sensations, and three dimensions of causal attributions for physical symptoms have been identified, i.e. physical illness ("somatic"), emotional distress ("psychological"), and environmental events ("external"). Research has shown that women attributed their physical symptoms to psychological origin more than men, and they complained more frequently of somatic symptoms which had no immediate organic etiology (27). Also, patients who explained their somatic symptoms within a psychological perspective were more likely to suffer from, and were treated for, depression (28). Similarly, our results also suggested that most of patients presenting directly to psychiatry due to their GI symptoms considered their problems had a psychological origin, while a significantly lower number of patients in the RG group did. This group of patients consisted predominantly of females, which

were also, to some extent, consistent with previous research results (27,29-32).

From the gastroenterologist's point of view, psychiatric symptoms of patients can be due to chronic GI symptoms, a primary psychiatric disorder, or both. Additionally, medications used to treat GI symptoms, e.g. metoclopramide, may as well cause psychiatric symptoms, e.g. depression or anxiety. A lifetime history of psychiatric disorder and/or current psychiatric symptoms were thought to be highly associated with current GI symptoms in clinical settings, and in the Epidemiologic Catchment Area study (33). It was found that individuals with at least two medically unexplained GI symptoms, suffered from higher rates of psychiatric disorders (33). Moreover, it is well known that refractory GI symptoms can benefit from psychiatric medications (34). With all these in mind, concerning GI symptoms of our patients, the DP group more frequently complained of a sense of fullness/abdominal tension while the RG group experienced bloating, abdominal pain, and constipation more frequently. To the best of our knowledge, this is the first report examining differences in clinical presentations between the DP, and the RG groups. Future studies should focus on the reasons for referral by gastroenterologists, and the underlying causes for the differences in symptom presentation between psychiatric patients with GI symptoms, and patients who were only suffering from GI illnesses. This might explain why some GI complaints were more frequently encountered in psychiatric populations.

The psychiatric profile differed between the two groups. In DP group, depressive disorders, trauma and related disorders, and personality disorders were more frequently diagnosed. In RG group, psychotic disorders were more commonly encountered. Additionally, impulsivity as a personality trait was more common in DG group. In routine practice, although gastroenterologists might be aware of the need for psychiatric services for their patients, only a minority of them eventually refer them. This might be due to their reluctance to provide medical treatment for their patients with current, or past psychiatric problems, because of fears of exacerbating these conditions (35).

It might also be possible that psychotic disorders are perceived as more serious disorders by these clinicians, and thus, these patients might be the majority of psychiatric cases referred for further psychiatric evaluation, while they do not consider other sorts of psychiatric diagnoses as conditions requiring urgent attention. This may explain the predominance of psychotic patients referred from gastroenterology clinics in our study. At least to some extent, the same reason may be an underlying factor why patients with impulsive personality traits are more likely referred when compared patients with personality traits of extraversion or neuroticism.

Our study has some limitations. We designed the present study cross-sectionally. Therefore, it is not convenient to discern causal relationships about our results. Lack of previous reports on this field made it difficult to compare our results. The data collected relied on the patients' self-reports, which might have been biased, and the severity of disorders was measured by using a general psychopathology scale rather than disorder specific measures, and thus might not have reflected real severity of disorders. The clinicians used their clinical judgement to decide whether their patients were exhibiting high levels of some personality traits rather than using standardized measurements. Although medical interviews might be, to some extent, considered to be more important than psychometric testing, this kind of interviewing might be biased by ability of the physicians. Therefore, addition of psychometric tests to medical interviews would have improved reliability of the results. The sample size was not large enough, and the study was conducted in a single secondary-care center, so generalization of results might be questionable. There was no detailed information on pharmacological treatment, somatic complications, and type of medical comorbidity (e.g. diabetes mellitus) for participants in the present study, all of which might have affected the results. Moreover, since we aimed to achieve the most exactly selected inclusion criteria, some definitions of the target symptom / disease might have been ambiguous in the present study. It was possible that not only patients with FGIDs (e.g. IBS) but also organic

GI diseases (e.g. inflammatory bowel disease) might have been included in both groups, which might be a confounding factor for interpretations of the results. It would be ideal to purify the subjects to more homogenous groups. For example, IBS, functional bloating, functional dyspepsia, and functional abdominal pain syndrome diagnosed according to Rome III criteria could have been the candidates of eligible criteria to enroll patients. Further studies considering these limitations, would guide clinicians to draw more reliable conclusions.

In conclusion; results of the present study have demonstrated that psychiatric patients with predominant GI symptoms differ on some aspects of demographics and clinical data between those who directly present to psychiatry, and those who are referred from gastroenterology. Our results suggest that these groups also differ in their primary psychiatric

diagnoses, and personality traits. Further studies are needed to explore differences in more details.

Contribution Categories	Name of Author
Development of study idea	S.B.
Methodological design of the study	S.B.
Data acquisition and process	S.B.
Data analysis and interpretation	S.B., M.Y., E. S.
Literature review	S.B., M.Y., E.S.
Manuscript writing	S.B., M.Y., E.S.
Manuscript review and revision	S.B., M.Y., E.S.

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