

# Diagnostic outcome of patients referred to psychiatry with medically unexplained symptoms: a retrospective study

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## Abstract

**Objective:** Medically unexplained symptoms (MUS) are commonly encountered in medical practice. In psychiatry, they are classified mostly as Somatoform Disorders and are often associated with anxiety and depression. The literature suggests that, in some cases, MUS may be ascribed to Somatoform Disorders when, fact, they are “organic” syndromes that are misdiagnosed. In developing countries, with fewer resources, MUS may be more difficult to assess. **Method:** We undertook a retrospective chart review to examine the demographics, referral pathway, management and diagnostic outcome of subjects (n = 50) referred to psychiatry with MUS over an 18 month period. **Results:** Subjects with MUS accounted for only 4.5% of the total number of files reviewed. In only 38% of cases did the final diagnosis in psychiatry concur with the referral diagnosis. In 28% of cases a new “organic” diagnosis was made and in 72% of cases a new psychiatric diagnosis was made. Subjects who were diagnosed with “organic” illness were seen fewer times prior to referral to psychiatry and were significantly older than other subjects. **Conclusion:** In developing countries like SA, a significant number of patients with MUS may have underlying “organic” illness, and most may have psychiatric disorders. Patients with MUS, especially older patients, should be more extensively investigated. Psychiatric referral of these patients is very appropriate.

**Keywords:** Medically unexplained symptoms; Psychiatric disorders; Retrospective review; Somatoform disorders

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## Introduction

Medical practitioners commonly encounter patients who present with symptoms that cannot be explained medically, for which no organic cause can be found, or symptoms they suspect are feigned for primary or secondary gain. At least a third of physical symptoms encountered in primary care defy adequate organic explanation. In primary care 10-15% of patients have disabling medically unexplained symptoms

(MUS), many of whom have a history of multiple MUS.<sup>1</sup> In secondary care the prevalence rates are even higher.<sup>2</sup> MUS accounts for more than 20% of consultations by frequent attendees in secondary care.<sup>3</sup> Such patients are responsible for a high proportion of health care costs.<sup>4</sup>

People with MUS have been shown to have higher rates of psychiatric disorders.<sup>5,6,7</sup> The “functional somatic syndromes” (irritable bowel syndrome, non-ulcer dyspepsia, fibromyalgia and chronic fatigue syndrome) in particular, have been shown in a meta-analytic review to be related to depression and anxiety.<sup>8</sup> A recent study by Cheng Ta Li and colleagues found high rates of psychiatric comorbidity in patients referred to consultation-liaison psychiatry services with MUS with 36.6% diagnosed with depression, 29.7% with anxiety disorders and 9.9% with a

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somatoform disorder.<sup>9</sup>

However, a less strong association was found by Jackson and Passamonti who carried out a five year prospective study of 500 patients with medically unexplained physical symptoms, where symptom outcome was assessed. More than half of patients experienced resolution of symptoms, 35% remained unexplained, 8% had mood, 6% had anxiety and 6% had somatoform disorders.<sup>10</sup>

Predictors of mental disorders in patients with MUS include greater number of symptoms (more than 3 symptoms), pain symptoms in two or more areas, multiple functional somatic syndromes, polypharmacy, failure to respond to multiple medication trials, intolerance to multiple medications, worse functioning and greater symptom severity.<sup>10,11</sup> Despite the probable high incidence of psychiatric disorders in this population, very few of these patients are referred to psychiatric services.<sup>5</sup>

From a psychiatric perspective, MUS are classified according to the DSM-IV as Somatoform Disorders.<sup>12</sup> Of the somatoform disorders, Conversion Disorder has been most widely investigated. The study by Slater and Glithero done in 1965 is still frequently quoted. They found that more than half of cases of Conversion Disorder were later re-diagnosed to be a neurological syndrome in a 2-10 year follow up.<sup>13</sup> In a more recent systematic review of misdiagnosis of Conversion Disorder, Stone et al in 2005, showed a decline in the mean rate of misdiagnosis of Conversion Disorder from about 29% in the 1950's to 4% in the last 30 years. This is thought to be due to improvement in study quality rather than just improvement in diagnostic accuracy.<sup>14</sup>

When MUS are suspected to be feigned for primary or secondary gain a diagnosis of Factitious Disorder or Malingering is considered. Earlier studies on Factitious Disorder support the stereotype that most people with Factitious Disorder fall in the profile of young female health care workers.<sup>15,16</sup> However, a retrospective examination of 93 patients with Factitious Disorder showed that it affects men and women with different demographic profiles, that diagnosis must be based on careful examination of behaviour, motivation and medical history, and not a stereotype.<sup>17</sup>

Although Malingering is a controversial diagnosis, studies suggest that we are likely to encounter it in our practice, especially when issues of compensation arise. Mittenberg and colleagues, in a study of 33531 cases seen by the American Board of Clinical Neuropsychology during a one year period, found that probable malingering and symptom exaggeration were found in 30% of disability evaluations, 29% of personal injury evaluations, 19% of criminal evaluations, and 8% of medical cases.<sup>18</sup>

In the public health services in developing countries such as South Africa, where special investigations can be difficult to access, and time to see patients limited, patients with MUS become even more difficult to assess. Despite this, there has been very little research done in this area in developing countries.

To evaluate this issue in the South African setting, we undertook a retrospective chart review to explore the referral pathway, presenting complaints, investigation and outcome of these patients. We also aimed to investigate whether there were any predictors of diagnostic outcome in these difficult cases.

## Method

### Site

Tygerberg Hospital is a large tertiary hospital in Cape Town, South Africa. The psychiatry department receives referrals from other departments within the hospital, from secondary hospitals in the area, from primary care clinics, general practitioners as well as private specialists in the area.

### Sample

We reviewed the hospital files of all the patients who were referred to the psychiatry department of Tygerberg Hospital over an 18 month period, from January 2007 to July 2008 to identify suitable patients according to the referral diagnosis on the referral letter. Any patient between the ages of 18 to 65 who had MUS or a diagnosis of malingering, factitious disorder or any of the somatoform disorders as their primary diagnosis or as one of the differential diagnoses on their referral letter were included in the study. We excluded only those who had no referral letter available in the file or those who were not fully assessed at psychiatry at the time of data collection.

Data on clinical and demographic variables, including the referral pathway, was collected from patient files using a standardised data collection form. All data was collected by a single investigator (RG), without any direct contact with patients. We did not interfere with patient assessment or management in any way.

### Ethics

Each patient received a research number which was linked to their Tygerberg hospital number only in a separate spread sheet which was destroyed at the end of the study. Therefore, individual patients could not be identified. The study was approved by the Committee for Human Research of the University of Stellenbosch.

### Analysis

All data was entered into a Statistica data base. A single statistical analysis was performed at the end of the study. All of the tests were interpreted at 5% significance level (2-tailed). Data analyses were performed with Statistica software version 8 (StatSoft, Inc., Oklahoma, USA [www.statsoft.com])

## Results

### General

Sixty-three potential cases were identified with the initial manual screening of 1391 hospital folders. At the end of the 18 month period, when the patient files were reviewed, 5 of the 63 were excluded for not yet having completed their assessment at psychiatry. Eight of the 63 files could not be recovered. We were therefore left with a total of 50 patient files to review. There were 34 females and 16 males. The average age was 40 years ( $\pm 12.4$  years). Findings on demographic variables are presented in Table I.

### Clinical characteristics and managements prior to referral

Sixty four percent of cases had comorbid medical illness. About half of these (30% of the total group) had multiple comorbid medical illnesses. Figure 1 presents the data on

**Table I: Demographic details**

Item	Mean	n	%	sd	min	max
Gender Male		50	32			
Age (in years)	40			12.4		
Ethnicity		50	52			
: mixed			36			
: white			8			
: black			4			
: indian						
Marital status		50	36			
: married/cohabiting						
Employment status		50	36			
: fully employed			8			
: part-time			2			
: pensioner						
: unemployed			54			
Education		50	34			
: matric or more			12			
On disability grant		50				
Income (in Rand/month)	1287.20			1809.60	0	7000

the different systems affected.

In terms of psychiatric comorbidity, 32% percent of cases were known with major depressive disorder, 4% had an anxiety disorder and 2% had a psychotic illness.

Seventy eight percent of referrals came from medical officers or registrars from within the hospital, 8% from hospital consultants and 4% from interns. Only 6% came from district hospitals, and 2% each from GPs and private specialists.

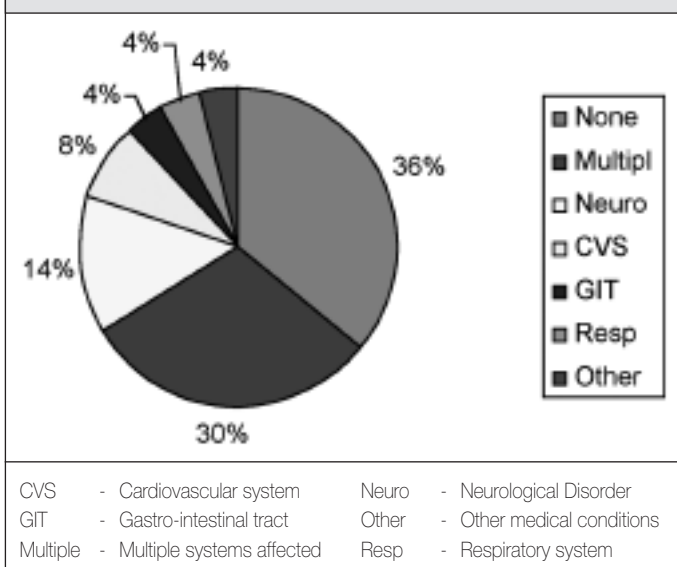
Seventy four percent of cases had 3 or fewer

consultations before they were referred to psychiatry. The mean number of consultations before referral was 3.3(± 2.9) min 1, max 12.

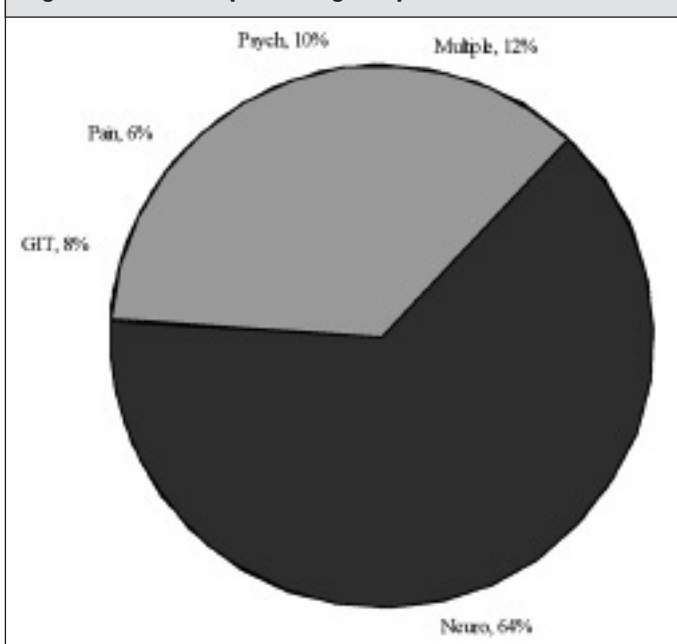
In terms of number of symptoms, the mean number of symptoms per case was 2.94 (± 1.57), the mode being 3, and ranging from 1 to 7 symptoms.

Figure 2 presents data on the nature of the presenting complaints, and Table II presents data on the management of cases prior to referral to psychiatry. When cases were referred to psychiatry, conversion disorder made up 44% of the referral diagnoses, malingering 20%, "other MUS" 18% and other somatoform disorders 18%. These results are presented in Figure 3.

**Figure 1: Comorbid medical illness**



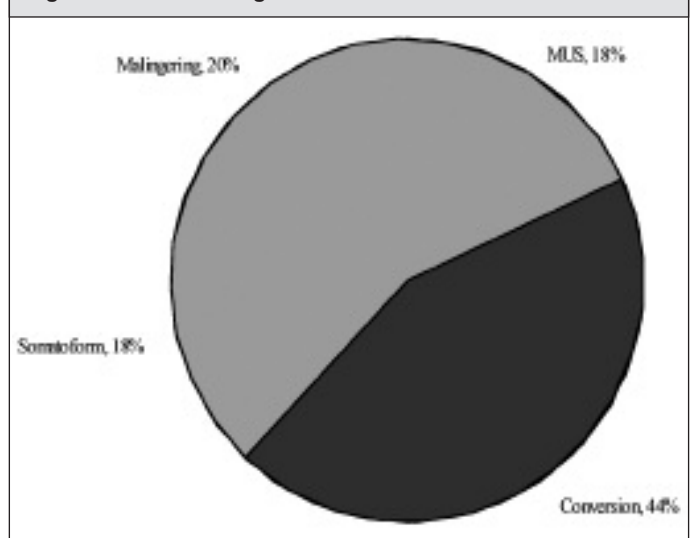
**Figure 2: Nature of presenting complaint**

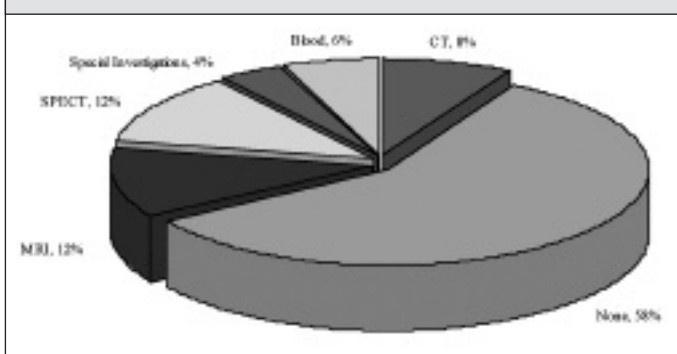


**Table II: Management prior to referral to psychiatry**

Admission to hospital	48%
Brain imaging before referral	48%
Treatment with psychotropics	20%
Treatment with physical meds	56%
"Non organic illness" primary referral diagnosis	72%

**Figure 3: Referral diagnoses**



**Figure 4: Investigations ordered by psychiatry****Table III: Management and outcomes in psychiatry**

First assessed by registrar	96%
First diagnosis concurs with referral diagnosis	44%
Admitted to psychiatry ward	16%
Referred for neuropsychiatry testing	14%
Final diagnosis concurs with referral diagnosis	38%
New psychiatric diagnosis added	72%
Known psychiatric diagnosis	20%

### Management in psychiatry

Each case was seen on average 4.3 ( $\pm$  4.1) times in psychiatry (min 1 consultation; max 20 consultations). In 42% of cases it was felt that further investigation was needed. Figure 4 gives a breakdown of the different investigations ordered. In only 38% of cases did the final diagnosis, made in psychiatry, concur with the referral diagnosis. In 28% of cases, a new "organic" diagnosis was added, and in 72% of cases a new psychiatric diagnosis was made.

There were 5 cases of Vascular Dementia, 4 cases of Dementia Secondary to Head Injury, 2 Cerebral Infarcts, 1 Multiple Sclerosis, 1 Lymphoma and 1 Infection.

In terms of psychiatric diagnoses there were 17 cases of a Somatoform Disorder, 15 of Major Depressive Disorder (MDD), 11 of Dementia, 4 of an Anxiety Disorder, 1 of Bipolar Disorder, 1 of Mild Mental Retardation and 1 of a Mood Disorder Secondary to a General Medical Condition. (Some cases had more than 1 diagnosis, e.g. MDD and conversion DO). Information on the further management in psychiatry is presented in Table III.

Seven of the 16 male cases had an "organic illness" diagnosed, compared to 7 of the 34 females ( $\chi^2 = 2.90$ ;  $df = 1$ ;  $p = 0.089$ ). Ethnic background, educational level, employment status, receipt of disability grant and marital status did not predict the likelihood of being diagnosed with an organic illness.

Cases who were diagnosed with a new "organic" illness had significantly fewer consultations (mean 2.0  $\pm$  1.41) than those who did not (mean 3.96  $\pm$  3.14) prior to referral ( $t = 2.06$ ;  $df = 37$ ;  $p = 0.046$ ). The mean age of cases diagnosed with "organic" illness was 46.4 years ( $\pm$  11.8 y) compared to 38.6 years ( $\pm$  12.1 y) in the other cases. This presents a statistically significant difference ( $t = -2.06$ ;  $df = 48$ ;  $p = 0.045$ ). There were no significant

differences in the likelihood of adding a diagnosis of an organic illness between the different referral diagnoses ( $\chi^2 = 1.29$ ;  $df = 3$ ;  $p = 0.730$ ).

### Discussion

Only 63 referrals were identified as appropriate for this study. This accounted for a small proportion (4.5%) of the total number of files that were manually examined (1391). This is in keeping with other studies that suggest that despite MUS being commonly encountered in primary and secondary care, and having a strong link with psychiatric illness, very few of these patients are referred to psychiatric services.<sup>2,3,5-10</sup>

As is the case in other study populations, it is very possible that somatoform disorders are underdiagnosed in our catchment area. Studies have shown that when specifically screened for, a much higher incidence of somatoform disorders is obtained.<sup>19,20</sup> The small amount of referrals may be an indication that the psychiatric or psychological issues in a patient presenting with MUS are not recognized. Perhaps due limited resources, a detailed social and psychiatric history is not being taken in these patients.

The most interesting finding of this study is that, in almost a third of cases (28%) referred to psychiatry with MUS, an additional "organic" diagnosis was added after assessment at psychiatry. This is a higher rate of misdiagnosis than described in a systematic review examining misdiagnosis in conversion disorder, where the rates are around 4%.<sup>14</sup> Furthermore, of these cases with "organic illness", only half had brain imaging before referral to psychiatry. This group of patients also had fewer consultations prior to referral when compared to other cases. One can postulate that this could be due to limited resources in terms of consultation time and access to investigations. It may however also suggest prejudice, where patients with suspected psychiatric symptoms are less likely to be extensively investigated.

The cases in which an organic illness was diagnosed were significantly older. This is not an unexpected finding, but may suggest that people presenting with MUS at an older age should be more extensively investigated to rule out organic pathology. There was some suggestion, although it did not quite reach statistical significance, of different likelihood between the genders of attracting an additional organic diagnosis. This needs to be further investigated, with larger samples, in future studies.

An unexpected finding was that 22% of cases were diagnosed with dementia. Nine of the 11 cases of dementia had neurological symptoms that could not be explained and 2 had psychiatric symptoms. This important finding should be noted by psychiatrists, neurologists and general physicians alike. Neurological signs are a common feature of Vascular Dementia, but are often atypical. Reflex asymmetry, hemi-motor dysfunction and dysarthria are the most common finding but many different neurological signs or symptoms can present.<sup>21,22</sup>

Of the 12 cases referred for MRI or Brain SPECT, 11 ended up having neurological illnesses. It is unlikely that such a high positive yield is a reflection of the clinician's

diagnostic accuracy. It is more likely that we are referring too few cases for these special investigations and may, in fact, be missing many diagnoses. It should also be noted with some concern that only 14% of cases were referred for neuropsychiatric assessment. This is probably a reflection of lack of resources, but may also suggest low levels of awareness of neuropsychiatric services in the medical fraternity.

In 72% of cases a new psychiatric diagnosis was made and 20% already had a previously known psychiatric illness. This left only 8% without any psychiatric diagnosis. Because of this high prevalence of psychiatric illness in this sample, no meaningful comparisons could be made between groups with and without psychiatric diagnoses.

The psychiatric illness could be a primary psychiatric illness with somatic symptoms, or secondary to the unexplained physical symptom. This is in keeping with another recent study where 96% of patients referred to C-L psychiatry services with MUS had a psychiatric diagnosis.<sup>8</sup>

### Limitations

The first limitation of this study is its retrospective methodological design. Another limitation was that, because data was gathered from patient files, without data from face-to-face interviews, some important information may not have been available. Also, despite efforts by the investigator to manually review all files available in the psychiatry department in a systematic way, to identify appropriate referrals made in the study period, there may have been referrals that were missed. Another limitation is that the small number of cases reviewed may have reduced the likelihood of finding statistically significant differences.

Lastly, this study examined only those cases where the referring agent suspected "non organic" illness. This accounted for only 4.5% of the files that were screened. It unfortunately did not investigate the 95.5% of other cases in terms of the incidence of MUS or Somatoform disorders that were diagnosed in this group by the psychiatry department, or the comorbidity of psychiatric illness and general medical conditions in this group. This is certainly an important issue that needs investigation in future studies.

### Conclusion

This study, despite its limitations, has allowed us to examine what has happened to a group of patients in a real life setting. It has shown that very few patients with MUS are referred to psychiatry. It also suggests that, in a developing country like South Africa, a significant number of these patients may have underlying "organic" illnesses, and the majority may have psychiatric disorders. It furthermore suggests that these patients, especially older patients, should be investigated more carefully, and that psychiatric referral of these patients is very appropriate. Clearly, more research is needed in this area in developing countries. Larger prospective studies and studies undertaken in primary care settings should be very useful.

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