

## ORIGINAL RESEARCH

# Study of the association between functional somatic complaints and depression

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## ABSTRACT

**Aim:** To study the functional somatic complaints (FSCs) associated with depression. **Materials and Methods:** A cross sectional study was done on 40 patients in a tertiary care hospital in Karnataka who were diagnosed to be having depression according to the ICD-10 DCR criteria. They were assessed on the Bradford Somatic Inventory (BSI) and the Montgomery- Asberg Depression Rating Scale (MADRS). **Results:** Majority of the participants were married, Hindus, educated up to middle school level, employed and of lower socioeconomic background. Functional Somatic Complaints were significantly more common in females. All patients were found to be having a minimum of 4 FSCs. The most common FSC was lack of energy followed by pain/tension in the neck and shoulders, dryness of mouth/throat, severe headache, palpitations and increased sweating. The mean MADRS score of the study sample was 24.25 indicating that FSCs were more common in mild to moderate depression. **Conclusion:** Functional Somatic Complaints are highly prevalent in patients diagnosed with depression. Most of the patients have more than 10 FSCs and the type of FSCs are similar to a certain extent across different socio demographic and clinical variables. Hence, patients reporting to primary health centres with these multiple vague somatic complaints must be routinely evaluated for depression. A thorough psychiatric assessment with appropriate intervention would aid them for a better quality of life. **Corresponding Author:** Dr. Rajatha Anand, Assistant Professor, Department of Pathology, Sri Siddhartha Medical College, Tumkur, India.

## INTRODUCTION

Depression is the 4th in the list of the most urgent health problems worldwide, as per the World Health Organization (WHO) and its lifetime prevalence is around 10-25% for women and 5-12% for men.<sup>1</sup> The likelihood of depression appears to increase the number of physical symptoms presented, and reporting more than three physical complaints was associated with a greater than 50% chance of having a depressive illness.<sup>2</sup>

As these somatic complaints are presumed to be a part of the depressive syndrome without any underlying physical cause, the term to describe them could be functional somatic complaint (FSC).<sup>2</sup> Earlier it was thought that FSCs were more common in non-western populations, particularly among Asians because of the cultural disapproval for expressing

strong negative emotions. Some authors even considered FSC an alternative ‘idiom of distress, prevalent in cultures where psychiatric disorders carry greater stigma. However, a cross-cultural study<sup>3</sup> conducted by the World Health Organization (WHO) suggested that worldwide FSC is the most common clinical expression of emotional distress and that it was more frequently noted in women, elderly, children, and those having relatively low incomes. Patients with these somatic complaints are relatively common in medical practice. These FSCs are known to increase the burden and disability associated with depression. Due to the predominance of physical symptoms, many patients believe their depressive illness to be physical in origin, and consult a physician rather than mental health professionals. This may lead to misutilization of medical services in terms of wrong diagnoses - leading to inordinate delay before initiation of appropriate treatment. The patients might have to undergo multiple laboratory investigations which in turn leads to greater economic burden, contributing greatly to the recurrence of another new depressive episode several years later.<sup>4</sup>

These reported physical symptoms reflect disruption in multiple organ systems ranging from gastrointestinal (nausea), cardiovascular (palpitations), visual (photophobia), neurological (dizziness or tremors) and musculoskeletal weakness and many more. Higher severity of painful somatic symptoms was associated with increased severity of depression and poorer quality of life.

### **Aims**

To study the functional somatic complaints (FSCs) associated with depression.

### **Objectives**

- 1) To assess the prevalence of FSCs in patients depression.
- 2) To evaluate the typology of FSCs in patients with depression.
- 3) Correlate the various FSCs with different socio demographic and clinical variables.

## **MATERIALS AND METHODS**

### **Setting:**

The study was carried out in a tertiary care teaching hospital in Karnataka, India. The study was approved by the ethics committee of the institution. All patients were assessed after taking written informed consent.

### **Patient selection:**

The study sample comprised of 40 patients attending the psychiatry OPD or admitted in the psychiatry ward.

### **Inclusion criteria:**

1. Patients fulfilling the ICD-10 DCR criteria for a depressive episode (excluding severe depressive episode with psychotic symptoms)
2. Patients aged between 18-60 years.

### **Exclusion criteria:**

1. Patients with any co morbid physical illness which could explain the reported somatic complaints, were systematically ruled out after thorough physical examination and appropriate laboratory investigations
2. Any other co morbid psychiatric disorder
3. Substance dependence.

### **Instruments:**

Patients fulfilling the inclusion criteria, upon explaining the purpose of the study were recruited after obtaining written informed consent. A “Semi Structured Proforma” was used to collect socio-demographic details of the patient. Patients were assessed on the Bradford Somatic Inventory (BSI) and thereafter the Montgomery-Asberg Depression Rating Scale (MADRS).

**Bradford Somatic Inventory<sup>5</sup>:** To assess the FSCs – the Bradford Somatic Inventory was used. It is a multi-ethnic inventory of FSCs associated with anxiety and depression. It is a 46-item inventory, including two items applying to men only. The patients were asked to rate each symptom on a scale of 0, 1 & 2 signifying if the symptoms have been absent, present on less than 15 days during the past month or present on more than 15 days during the past month respectively. Based on the total score FSCs are categorized into 3 grades - >40 being “high” range, 25-40 “middle” range and <25 “low” range.

**Montgomery-Asberg Depression Rating Scale<sup>6</sup>:** This scale consists of 10 items, each item to be rated on a scale of 1 to 6. Based on the total score the level of depression was assessed – 0 to 6 – normal; 7 to 19 – mild depression; 20 to 34 – moderate depression; >34 – severe depression.

**Statistical analysis:** Data collected was entered in MS Excel 2007 and analysed using Epi Info 3.5.3. Descriptive analysis in terms of proportion, mean and standard deviation with range for variables and frequency with percentage for nominal variables was computed.

## Results

### Socio-Demographic Profile:

The detailed socio-demographic profile of the study participants is shown in Table 1. The mean age of the participants was 39.7 years. With respect to different age groups, 35.9% (n=14) were aged 31-40 years which constituted about one third of the sample. The majority of them were females (69.2%, n=27) and married (82.1%, n=32). Their mean education level was up till middle school with more number of illiterates (28.2%, n=11). The mean monthly income was in the range of 5387-8988 Indian Rupees. About three fourth (n=28) of the study sample comprised of Hindus (71.8%) while the remaining were Muslims.

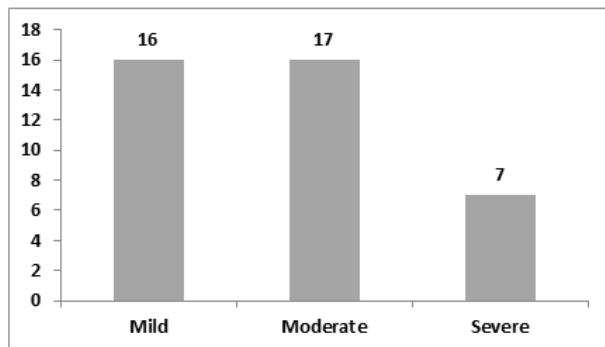
**TABLE 1: SOCIO DEMOGRAPHIC CHARACTERISTICS**

AGE GROUP	Frequency	Percentage
21-30	10	25.10%
31-40	11	28.20%
41-50	14	35.90%
51-60	5	12.80%
<b>GENDER</b>		
Male	13	32.80%
Female	27	69.20%
<b>MARITAL</b>		
Single	3	7.50%
Married	32	82.10%
Divorced	1	2.60%
Widowed	4	10.30%
<b>EDUCATION</b>		
Illiterate	11	28.20%
Primary School	10	25.60%
Middle school	3	7.5%
High School	10	25.60%
Intermediate	4	10.30%
Graduate or	2	5.10%

post Graduate		
<b>RELIGION</b>		
Hindu	28	71.80%
Muslim	12	30.20%
<b>EMPLOYMENT STATUS</b>		
Unemployed	8	20.90%
Unskilled Worker	12	30.80%
Semi Skilled Worker	16	41.00%
Skilled worker	2	5.10%
Semi-Profession	2	5.10%
<b>INCOME</b>		
<Rs.1802	6	15.40%
Rs 1803-5386	8	20.90%
Rs 5387-8988	14	35.90%
Rs 8989-13494	9	23.10%
Rs 13495-17999	2	5.10%
Rs 18000-36016	1	2.60%
<b>LIVING</b>		
Parents	5	12.50%
Alone	1	2.60%
Spouse & Children	30	76.90%
Others	4	10.30%

#### **Clinical Profile:**

The mean MADRS score of the study sample was 24.25. Mild and moderate depression had an almost equal incidence, with mild depression being 42.5% (n=17) and moderate depression being 40.03% (n=16). 7 patients (17.95%) had severe depression. Majority of the patients, i.e. 90% of them complained of reduced sleep (n=36). Other common depressive symptoms included Reported sadness (77.5%, n=31) followed by Inability to feel (72.5%, n=29) and Lassitude (57.5%, n=23).

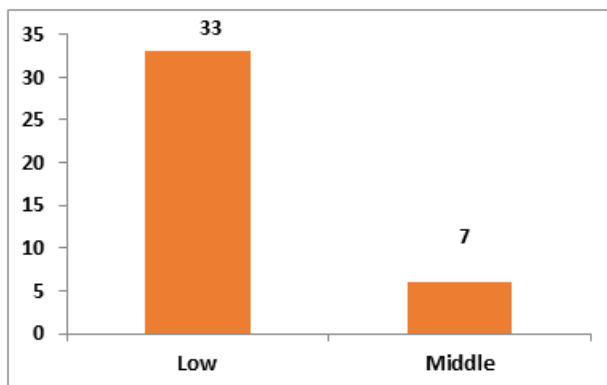
**Figure 1****Prevalence and Typology of Functional Somatic Complaints:**

Of the 40 study subjects, all of them reported a minimum of 4 FSCs (100%). Twenty one (52.5%) patients reported 11 to 20 FSCs, 9 (22.5%) patients reported 21 to 30 FSCs and only 2(5%) patients reported more than 31 FSCs. Severe headache was the commonest complaint present on less than 15 days in the past month with 15 patients (38.46%) reporting it. As to the symptoms present on more than 15 days during the past month, half of the study sample (50%, n=20) complained of lack of energy. Other common complaints include pain/tension in the neck and shoulders (48.72%), dryness of mouth/throat (43.59%), severe headache (38.46%), aware of palpitations (38.46%) and increased sweating (35.9%). A complete detail of the various FSCs as assessed on the BSI are shown in Table 2.

**TABLE 2: DESCRIPTIVE STATISTICS OF INDIVIDUAL FUNCTIONAL SOMATIC COMPLAINT AS PER BRADFORD SOMATIC INVENTORY**

BSI items	Absent		Present on <15 days during last 1 month		Present on >15 days during last 1 month	
	Count	%	Count	%	Count	%
Severe headache	9	23.08	15	38.46	15	38.46
Fluttering or feeling of something moving in stomach	37	94.87	1	2.56	1	2.56
Pain/tension in neck & shoulders	13	33.33	7	17.95	19	48.72
Burning/itching all over skin	35	89.74	1	2.56	3	7.69
Feeling of constriction of head	31	79.49	6	15.38	2	5.13
Pain in chest	24	61.54	9	23.08	6	15.38
Dryness of mouth/throat	14	35.90	8	20.51	17	43.59
Darkness/mist in eyes	23	58.97	11	28.21	5	12.82
Burning sensation in stomach	25	64.10	8	20.51	6	15.38
Lack of energy	10	25.64	9	23.08	20	51.28
Head feeling hot/burning	33	84.62	4	10.26	2	5.13
Sweating	15	38.46	10	25.64	14	35.90
Pressure/tightness in chest	37	94.87	2	5.13	0	0.00
Pain abdomen	33	84.62	3	7.69	3	7.69
Choking sensation in throat	34	87.18	4	10.26	1	2.56
Hands/feet going numb	26	66.67	8	20.51	5	12.82
Aches & pains all over body	20	51.28	9	23.08	10	25.64
Feeling of heat inside body	34	87.18	3	7.69	2	5.13
Palpitations	16	41.03	8	20.51	15	38.46
Pain/burning in eyes	31	79.49	6	15.38	2	5.13
Indigestion	33	84.62	5	12.82	1	2.56

Trembling/shaking	20	51.28	8	20.51	11	28.21
Frequency of urination	30	76.92	6	15.38	3	7.69
Low back trouble	26	66.67	7	17.95	6	15.38
Stomach feeling swollen/bloated	38	97.44	1	2.56	0	0.00
Head feeling heavy	37	94.87	1	2.56	1	2.56
Feeling tired, when not working	25	64.10	8	20.51	6	15.38
Pain in legs	25	64.10	10	25.64	4	10.26
Nausea	25	64.10	11	28.21	3	7.69
Pressure inside head	37	94.87	2	5.13	0	0.00
Difficulty in breathing	36	92.31	1	2.56	2	5.13
Tingling all over body	37	94.87	1	2.56	1	2.56
Constipation	37	94.87	2	5.13	0	0.00
Wanting to open bowels more often than usual	37	94.87	2	5.13	0	0.00
Sweating of palms	25	64.10	10	25.64	4	10.26
Difficulty in swallowing	38	97.44	1	2.56	0	0.00
Feeling giddy/dizzy	21	53.85	14	35.90	4	10.26
Bitter taste in mouth	31	79.49	6	15.38	2	5.13
Heaviness of body	38	97.44	1	2.56	0	0.00
Burning micturition	35	89.74	3	7.69	1	2.56
Buzzing noise in ears/head	35	89.74	1	2.56	3	7.69
Heart feeling weak/sinking	40	100.00	0	0.00	0	0.00
Excessive gas/belching	27	69.23	7	17.95	5	12.82
Hands/feet getting cold	30	76.92	5	12.82	4	10.26
Difficulty in erection (males only)	37	94.87	2	5.13	0	0.00
Feeling of passing semen in urine (males only)	40	100.00	0	0.00	0	0.00



**Figure 2**

## DISCUSSION

This study attempted to determine the prevalence and typology of FSCs in patients with depression and to study its relationship with various socio-demographic and clinical variables. Our study showed that FSCs were found to be highly prevalent in depressed patients. Several possible explanations exist for this association. It might signify a reactive increase of depression and anxiety in patients suffering from chronic bodily symptoms. Alternatively, bodily and psychological symptoms may be related but have different expressions of common distress. Finally, these bodily symptoms or the heightened awareness

for them could represent a primary psychological phenomenon, a consequence of depression and anxiety.<sup>7</sup>

With regard to socio demographic variables, the present study included 40 subjects whose mean age was about 39 years. Majority of the participants were married, Hindus, educated up to middle school level, employed and earning less than 8988 rupees. This profile is similar to other studies from India.<sup>2,4</sup> The total BSI score as well as the mean number of FSCs were significantly higher for females. This finding was supported by both Western and Indian studies which have reported higher prevalence of FSCs in females. This may simply be due to a higher prevalence of depression in women. Other factors may be a history of sexual or physical abuse, gender differences in social roles and responsibilities, cultural factors permitting greater expressiveness in women or amplification of somatic symptoms.<sup>8</sup> Few studies have reported higher prevalence in males, though it was not specific to depression.<sup>9</sup> In our study, there was a higher number of FSCs noted in those who received no education or educated less than middle school, when compared to those educated beyond high school. This was similar to studies done in the West,<sup>7,10</sup> though an Indian study<sup>4</sup> did not find any significant difference. Our study also found a higher number of FSCs in those from lower socioeconomic status, which was further supported by the Western studies.<sup>7,8,10</sup>

Majority of our patients (82%) had mild to moderate depression, whereas other studies<sup>2,4,8</sup> have noted more FSCs in moderate to severe depression. The mean number of FSCs was 17.05 with all of them having a minimum of 4 FSCs and majority of them (75%) having more than 10 FSCs. The most commonly noted FSC was lack of energy (50%) followed by pain/tension in the neck and shoulders (48.72%), dryness of mouth/throat (43.59%), severe headache (38.46%), aware of palpitations (38.46%) and increased sweating (35.9%). This profile is similar to that reported in an earlier study<sup>4</sup> from India which evaluated FSCs using the BSI itself, but is more when compared to another study<sup>2</sup>. This could be explained by the use of PHQ-15 in the later study which covers only 15 symptoms, whereas the BSI includes a wide range of 46 symptoms. Other studies<sup>2,3,9,10</sup> also reported prevalence rates of  $\geq 1$  FSC(s) in 66 to 93% patients attending primary care settings and 72 to 100% in patients attending psychiatric centers.<sup>11</sup> A study<sup>9</sup> from India, although not restricted to depressed patients, reported 4 FSCs per patient. Another study using BSI for assessment reported 21 FSCs per depressed patient.<sup>11</sup> When comparing the findings of the present study with these studies, the prevalence in our study was within the previously reported range.

To conclude, this study suggests that FSCs are highly prevalent in patients diagnosed with depression. Most of the patients have more than 10 FSCs and the common FSCs are lack of energy, pain/tension in the neck and shoulders, dryness of mouth/throat, severe headache, palpitations and increased sweating. On comparing the findings of this study with the available literature on the subject, it can be suggested that the type of FSCs are similar to a certain extent across different socio demographic and clinical variables.

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