

## SYMPTOMATOLOGY AND COMORBIDITY OF SOMATIZATION DISORDER AMONGST GENERAL OUTPATIENTS ATTENDING A FAMILY MEDICINE CLINIC IN SOUTH WEST NIGERIA.

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### ABSTRACT

**Background:** Individuals with somatization may be the most difficult to manage because of the diverse and frequent complaints across many organ systems. They often use impressionistic language to describe circumstantial symptoms which though bizarre, may resemble genuine diseases. The disorder is best understood in the context “illness” behaviour, masking underlying mental disorder, manifesting solely as somatic symptoms or with comorbidity.

**Objective:** To evaluate somatization symptoms and explore its comorbidity in order to improve the management of these patients.

**Methods:** A cross-sectional survey of 60 somatizing patients who were part of a case-control study, selected by consecutive sampling of 2668 patients who presented at the Family Medicine Clinic of University College Hospital Ibadan, Nigeria between May-August 2009. Data was collected using the ICPC-2, WHO- Screener and Diagnostic Schedule and analysed with SPSS 16.

**Results:** There were at least 5 symptoms of somatization in 93.3% of the patients who were mostly females. Majority had crawling sensation, “headache”, unexplained limb ache, pounding heart, lump in the throat and insomnia. The mean age at onset was 35yrs with 90% having recurrence of at least 10yrs. Approximately 54% had comorbidity with cardiovascular disease being the most prevalent.

**Conclusions:** The study revealed that somatization is not a specific disease but one with a spectrum of expression. This supports proposition that features for the diagnosis of somatization could be presence of three or more vague symptoms and a chronic course lasting over two years. It is important to be conversant with pattern of symptoms and possible comorbidity for effective management of these patients.

**Keyword:** Somatization, Bizarre Symptoms, Comorbidity, Crawling sensation

### INTRODUCTION

Somatization disorder constitutes majority of the somatoform ailments and is at the extreme end of severity of this group of disorders.<sup>1</sup> The more common somatization pattern seen in outpatient settings may not reach the diagnostic threshold but are clinically and functionally significant.<sup>1</sup> The medical histories are often circumstantial, inconsistent and disorganized.<sup>2</sup> The symptoms are non-specific in character, of low diagnostic value and some patients may exhibit ‘*la belle* indifference’ which is astounding discrepancy between their behaviour and subjective complaint.<sup>3</sup> The disorder is associated more with emotional regulation and brain function, other than the area of the body that has become the focus of the

patient’s attention.<sup>4</sup> The presenting complaint varies throughout life and its nature varies with respect to the sociocultural environment and life experience of the patient. The complaints frequently include chronic pain, problems with the digestive system, nervous system and the reproductive system.<sup>5</sup> Somatizing patients are unaware of their underlying psychiatric disturbance and are not deliberately faking their symptoms.<sup>4</sup> The specific form of illness that surfaces reflects the patient’s conscious beliefs about how disease should present.<sup>5</sup> How or why a patient chooses a specific symptom is also unclear, an explanation includes a symbolic connection to underlying conflict or alternatively, symptom modelling in which patients

mimic somatic symptoms that have previously occurred in themselves or in a family member as a result of organic disease.<sup>6</sup> These symptoms reflect a patient's concept of sickness, rather than organically disturbed anatomy or physiology and so they appear bizarre to the attending physician.<sup>5</sup>

Somatization is not a specific disease but rather a process with a varied manifestation and doubt remain whether its classification really captures a uniform entity.<sup>7</sup> The presence of more than three vague or exaggerated symptoms in different organ systems and a chronic course lasting over two years has been proposed for diagnosis.<sup>3,7</sup> Escobar *et al*, proposed the Somatic Symptoms Index (SSI), which required a history of six medically unexplained symptoms for women and four for men.<sup>8,9</sup> The risk of developing the disorder is higher in females and when confounded by emotional liability, the risk increases by six fold.<sup>5</sup>

The disorders can affect anyone of any age. Age incidence has been reported to vary from early childhood to mid-thirties, severity may fluctuate but symptoms persist for several years and complete relief for an extended period is rare.<sup>2,10</sup> It is said that these patients have a lifetime median of 22 admissions distributed all over medical and surgical specialties.<sup>11</sup> It is noted too that cases of depression and anxiety disorders may present to family physicians with nonspecific somatic symptoms similar to those of somatization.<sup>7</sup>

The family physician frequently attends to patients with unexplained medical symptoms. These may either be patients with no physical disease, or those with coexisting physical disease that does not account for the presenting symptoms. Somatization is often a diagnosis of exclusion, which can be costly and frustrating in patients with multiple and chronic complaints.<sup>4,7</sup> The challenge in working with these patients is to simultaneously exclude medical causes for physical symptoms while considering a mental health diagnosis.<sup>1,7</sup> Medical training emphasizes the management of organic problems and may leave physicians unprepared to recognize or address somatoform complaints.<sup>1,2</sup> It is not helpful to tell these patients that their symptoms are imaginary, as it is recognized that true physical symptoms can result from psychological stress.<sup>5</sup> Physicians should prevent iatrogenic harm especially when new symptoms arise, limited physical examination and invasive diagnostic or therapeutic procedures should be permitted only on objective evidence.<sup>3,7,12</sup>

Painstakingly attending to these patients can be rewarding for both the patients and the health care

system, as the patient goes away feeling good with eventual better prognosis. The attending physician then reduces the peculiar burden these patients can be to the health system especially in the area of repeated unsatisfactory visit and seemingly ineffective treatment plan.

## MATERIAL AND METHODS

### *Study setting*

The study was carried out at the Family Medicine Outpatient Clinic of the University College Hospital (UCH), Ibadan. Ibadan is the capital of Oyo state, situated in the south-Western region of Nigeria. Virtually all of Nigeria's ethnic groups are represented with preponderance of the indigenous people of Yoruba ethnicity. The University College Hospital, Ibadan is the premier teaching hospital in Nigeria, rendering health care to residents in Ibadan and its environs and serves as a referral centre for other cities and towns in Nigeria. The Family Medicine clinic is the entry point for most patients presenting to the UCH, Ibadan, where patients of all ages and both gender with various diseases condition are attended to by consultant and resident Family Physicians with referral to other specialties as appropriate.

### *Study population*

This study is part of a case control study of 120 participants comprising 60 adult patients with somatization disorder and 60 adult patients in the control group; however the survey of interest of this article is that of the 60 patients with somatization disorder. These were patients presenting to the family medicine clinic of the UCH between May 2009 and August 2009. The sample size was an estimate using the formula for comparative study [ $n = (2z^2pq)/d^2$ ] incorporating the prevalence for somatization from a previous local study.<sup>8</sup> The calculated sample size has a statistical power of 0.80 using Power Analysis and Sample Size Software version 13 (PASS 13).

A total of 2668 adults presented to the Outpatient Unit during the study period of which all consecutive consenting patient were screened for somatization using a validated structured questionnaire administered by the attending physicians and research assistants. Consecutive individuals who satisfied the screening criteria were then administered the diagnostic tool; however respondents who satisfied the initial screening but didn't fulfil the diagnostic criteria were dropped off from the study during the selection process. Of these there was eventual identification of 60 eligible respondents who satisfied both screening and the diagnostic criteria for somatization. The selected somatizing patients were then matched with a control group at ratio 1:1, using age (with difference

of  $\pm 2$  years), sex and level of education. The control group were those who consented to participate in the study and they were also verified, not to be somatizers by administration of both the screening and diagnostic criteria. Non-consenting patients and patient with other diagnosed mental health issues were excluded from the study. The detail of survey of the control group is not of importance to this article, therefore it is excluded.

### Methods

Survey method was a cross-sectional one using standardized interviewer administered questionnaires. The WHO SSD-World Health Organization Screener for Somatoform disorders was used as screening tool for somatization, this is a 12 item questionnaire developed by experts to identify patients likely to present with somatoform disorder.<sup>13</sup> A positive response to at least 3 of the 12 screening questions in the previous 3 months qualified the patient for recruitment into the study. The disorder was further verified using the WHO SDS-World Health Organization, Somatoform Disorder Schedule.<sup>13</sup> The WHO SDS includes 14 items that strictly assesses for somatization and a positive response to at least 6 of the 14 symptoms spanning at least two years is diagnostic of somatization. Both tools are validated instrument with high inter-rater reliability and test-retest diagnostic reliability.

The respondents' bio data was obtained as well as age at onset of somatization, from which duration of somatization symptoms was extrapolated. Also positive response to persistent symptom distress, repetitive consultations and dissatisfaction with physician explanation of absence of physical attributable cause to the symptoms was key to the diagnosis. Additional presenting complaints suggestive of comorbid medical condition were categorized according to the International Classification of Primary Care (ICPC).<sup>14</sup> Relevant clinical examinations carried out included assessment of BMI, vital signs, affect, examination of the abdomen, light sensation and proprioception. Hematocrit (PCV) and urine analysis was done for each participant. A few of the somatizing patient had some further investigation as indicated.

### Data Analysis

Frequency tables were generated for relevant variables. Descriptive statistics such as mean and standard deviations were used to summarize quantitative variables while categorical variables were summarized with proportions and percentage in table and charts. Statistical level of significance was taken as,  $p < 0.05$ . The data was analyzed with the Statistical Package for

the Social Sciences (SPSS) software version 16 after sorting and coding the questionnaire.

### Ethical consideration

Ethical clearance for the study was obtained from the joint U.I/U.C.H Ethical Review Board. Informed consent was sought and obtained from each study subject recruited in accordance with ethical principles for the guidance of physicians in medical research.

### RESULTS

There were total of 60 somatizing patients, of which 30% were males and 70% females with male to female ratio of 1:2.3.

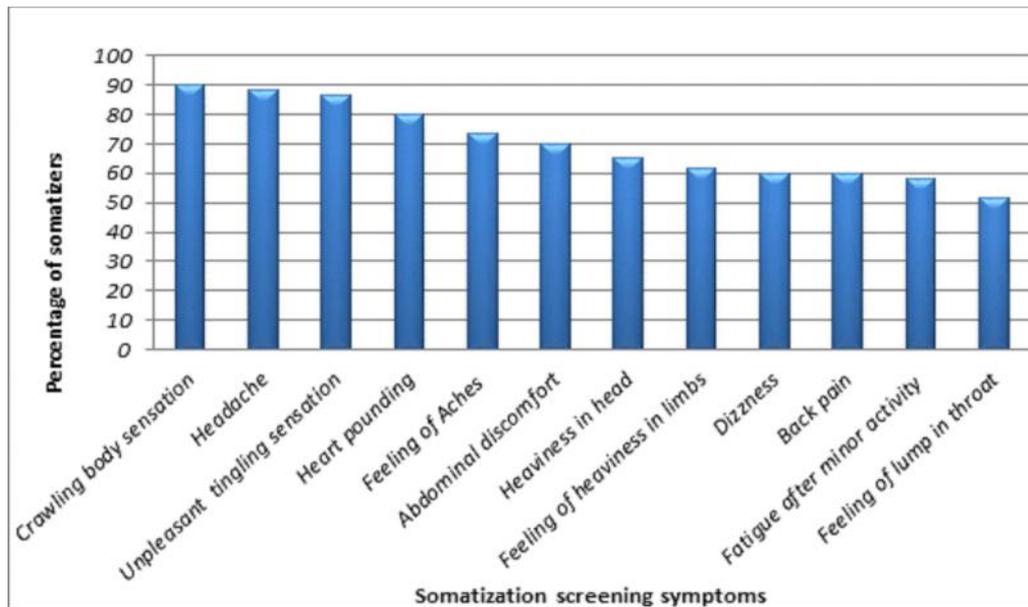
The mean age of the somatizers was  $43.7 \pm 13.0$  yrs. The age range was 21yrs-78 yrs and majority (81.7%) were aged between 20yrs-59yrs. The mean age at onset of somatization was found to be  $38.2 \pm 1.4$  yrs. The earliest age at onset was 17yrs, 48.4% of the somatizers were aged  $< 35$ yrs at onset while 51.7% started somatizing at  $> 35$ yrs of life. The mean duration of symptoms was 5.5 yrs; majority (90%) of somatizers had duration of at least 10yrs while a few even had up to 3 decades history of complaints.

The eligibility into the study was satisfaction of at least 3 of the 12 screening symptoms list, majority (93.3%) had at least 5 symptoms, of which 26.7% had 9 symptoms and 13.3% had 11 symptoms (Table 1).

**Table 1:** Frequency of WHO SSD-screening symptoms for somatization amongst the respondent

Number of somatization screening symptoms	Percentage of somatizers
3	1.7
4	5.0
5	6.7
6	6.7
7	8.3
8	15.0
9	26.7
10	8.3
11	13.3
12	8.3

*Crawling body sensation* was mostly seen in 90%, followed by *unpleasant numbness and tingling sensation* in 86.7%. The complaint of "*headache*" was found in 88.3%, 80% of them felt their *heart pounding in the chest* while feeling of *lump in the throat* was seen in 51.7%. (Fig. 1)

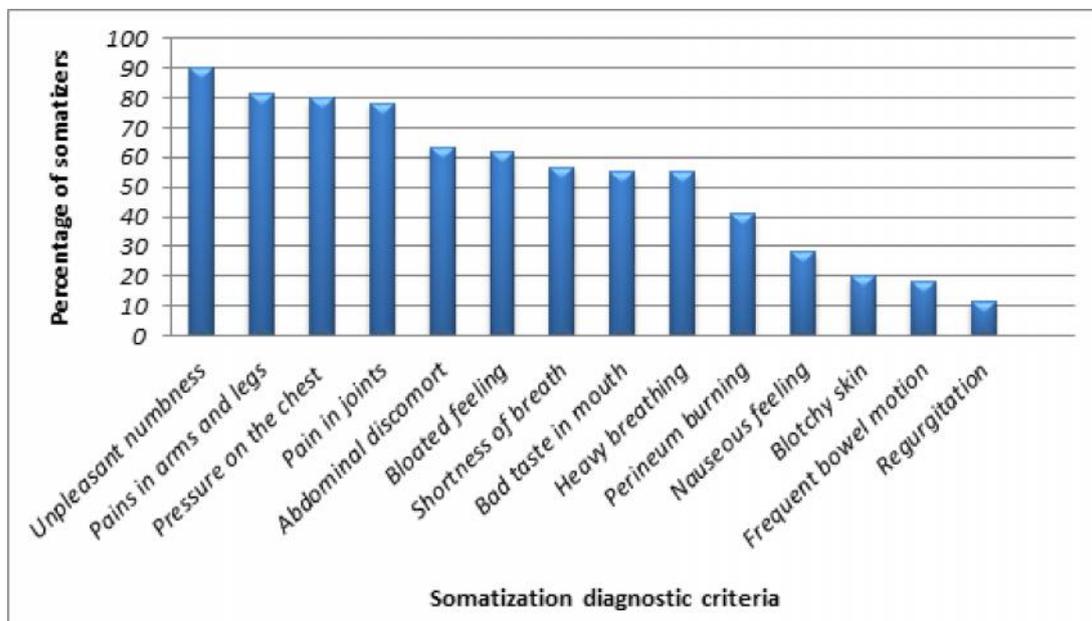


**Figure 1:** Occurrence of somatization screening symptoms amongst the respondent

Statistics of the WHO (SDS) diagnostic criteria showed that complaints of *bothersome tingling sensation* ranked topmost (90%), 81% complained of *pains in arms or legs other than in the joint*, with 80% complain of the *feeling of pressure on the chest*. Gastrointestinal related symptoms were the least complained of (Fig. 2). It's noted that there is some similarity between the screening and diagnostic criteria.

them complained of other ambiguous symptoms which included preoccupation with normal sexual functioning, intermittent buzzing in the ears or unexplainable strange feelings all over the body.

Aside the identified symptoms exclusive to somatization disorder, 53.3% of the somatizing patients had associated comorbidity. The comorbidity



**Figure 2:** Somatization diagnostic symptoms pattern

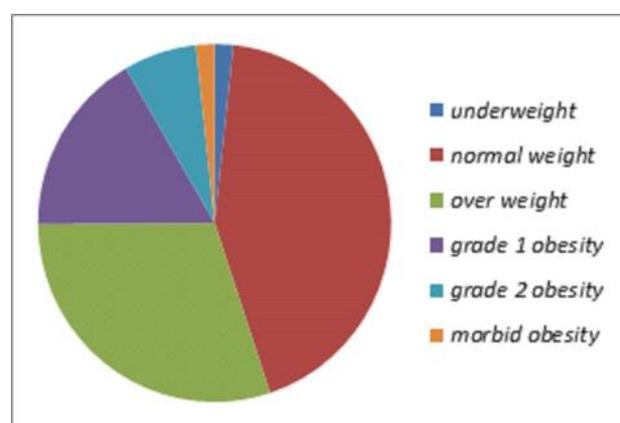
Other presented vague symptoms suggestive of somatization not captured in the research tool are complaints of *insomnia* (51.0%), *generalized burning sensation* (40%), *peppery sensation* (26.7%) usually starting from the head, *generalized unremitting body pains* (23.3%) and *internal biting sensation* (5%). Approximately a third of

were various health complaint which when categorized using the ICPC-2 included complaints related to the cardiovascular system in 13.3%, 8.3% related to the female genital system, spondyloarthropathy in 6.7% of the somatizers with smaller percentages of complaints varied across other systems (Table 2).

**Table 2:** Pattern of comorbidity associated with somatization in the respondents

Variable	N=60 (%)
<b>ICPC – 2 Classification</b>	
(i.) <b>Cardiovascular</b>	<b>8(13.3)</b>
Hypertension	7(11.7)
Cardiomyopathy	1(1.6)
(ii.) <b>General/Non-specific</b>	<b>3(5.0)</b>
Malaria	3(5.0)
(iii.) <b>Digestive</b>	<b>2(3.3)</b>
Peptic ulcer disease	1(1.65)
Hepatitis	1(1.65)
(iv.) <b>Female Genital System</b>	<b>5(8.3)</b>
Pelvic inflammatory disease	2(3.3)
Climacteric symptom	3(5.0)
(v.) <b>Musculoskeletal</b>	<b>4(6.7)</b>
Osteoarthritis	3(5.0)
Lumbosacral spondylosis	1(1.7)
(vi.) <b>Endocrine/Metabolic (Diabetes)</b>	<b>1(1.7)</b>
(vii.) <b>Eye (cataract/presbyopia)</b>	2(3.3)
(viii.) <b>Ear (wax)</b>	1(1.7)
(ix.) <b>Skin (Papular urticaria)</b>	2(3.3)
(x.) <b>Others</b>	<b>4(6.7)</b>

Other clinical data analysis revealed that 15% of the somatizing patients had dull affect and 6.7% had anxious affect while majority had normal affect. Most of the respondents also had normal BMI as shown in Fig. 3. All somatizers had normal light sensation and proprioception test and no significant finding on abdominal examination, none had anemia or glycosuria but 2% had abnormal heart sound and 5% had traces of proteinuria.



**Figure 3:** Body mass index of the somatizers

## DISCUSSIONS

It has been reported that females are more prone to somatization with twofold increase in risk when compared to men.<sup>1,5,15</sup> Women are known to also report more poor physical health and being female correlates positively to risk for somatization, predicts its stability and confers chronicity, so it's not surprising that 70% of the studied somatizers were female.<sup>1,2,15</sup> In tandem with reports that the age range for somatization is from 18 to 95 years with a mean age of 50.2 years.<sup>8,15</sup> This study revealed age range of 21 - 78 years and the mean age at onset of somatization to be  $38.2 \pm 1.4$  yrs with the earliest age of onset at 17 yrs of age. In addition result showed that 90% of the somatizers had duration of at least 10 yrs. These results agree with fact that the disorder runs a unremitting chronic course which averages between 10 yrs and 18 yrs.<sup>2,10</sup> The participant's age at onset and duration of symptoms from this study supports that the diagnostic criteria for this disorder is early onset and long-term stability.

Crawling sensation was seen in the majority in keeping with research that this feature depicts somatization. The DSM IV-TR notes that the sensations of worms in the head or ants crawling under the skin are reported especially in the black Africans and South Asian countries, as a pseudoneurologic symptom.<sup>16</sup> Studies from Nigeria also reported that a specific pattern of somatization in this country includes crawling sensations amongst others.<sup>17</sup> Plausibly this symptom is prevalent due to interplay of catastrophic thinking and cultural semblance of this idiomatic expression of psychic distress amongst Africans.<sup>4,6,16</sup> Akin to crawling sensation is the complaint of "unpleasant numbness" or "tingling sensations" which ranked with 90% response. This is in accordance with studies that somatizing patients frequently complain of tingling sensation and numbness, which is most often generalized or localized to the extremities with lack of an identifiable physical cause.<sup>3,11</sup>

Somatizers refer to routine complaints of headaches which are usually described as constant, "dull and heavy" and usual location is from and between the vertex to the occipital region as was observed in this study and similar Nigerian studies.<sup>6,18</sup> Although there was complaint of headache, there was no apparent discomfort nor interference with their everyday functioning. Somatization in the childhood period was characterized by complaints of classical recurrent "headaches" and this behavioural pattern continues into adulthood as was reported by most of our patients.<sup>19</sup>

Approximately 81% complained of aches or pains in the arms or legs other than in the joints, while 60%

complained of back and other joint pains which were diffuse, nonspecific, and ambiguous.<sup>5,18</sup> It has been cited that the diagnosis of this disorder involves a continuum of everyday aches and pains to “disabling” symptoms.<sup>19</sup> Adults with somatization, as seen in this study, are known to be affected by chronic “pain” syndromes often occurring in combination.<sup>6,16,20</sup> In somatization the complaints of vague and diffuse “pain” symptom affecting various regions of the body is the same across cultures.<sup>18-20</sup>

Somatization is known to be associated with complaints of “heart distress” or “racing heart” as it was seen in 80% in this study.<sup>6,19</sup> It was observed in this study that even though majority complained of this symptom, most of them had normal cardiovascular parameters. In the cultural setting where this study was done, emotional issues are readily referred to as “matter of the heart” hence the tendency for majority of the somatizers to complain of these symptoms, which had been attested to by local studies.<sup>6,8</sup>

Gastrointestinal symptoms like pains, a feeling of “bad taste” in the mouth, “a lump in the throat” and something moving round the abdomen migrating to the throat, as seen in half of the respondent is known to be associated with somatization.<sup>6,16,20</sup> Despite these symptoms no significant finding was elicited on physical examination as is often the case in somatization.<sup>13</sup>

Dizziness was a relatively common presentation amongst these patients, which have been observed as culturally acceptable illness behaviour in the study population, as it is easily reckoned as a symptom of anaemia.<sup>8,18</sup> The complaint attracts sympathy from significant others which fosters the persistence of dizziness as a somatization symptom.<sup>4,6</sup> However none of the somatizers on evaluation was anaemic despite the 60% response to complaint of dizziness.

Burning sensation of the perineum was seen in 40% of the somatizers, there is possibility that they are uncomfortable reporting sexual related symptoms, in keeping with the under-reporting of sexual complaint in the disorder as this might be a sensitive issue.<sup>3,21</sup> Sexual function related symptoms that are known to be associated with the disorder includes, sexual relation indifference, painful or unpleasurable coitus which were not explicitly asked for in this study in view of its sensitivity.<sup>13,22</sup> Pertinent history of other symptoms not included in the tool was elicited, this included insomnia as seen in 51.7% of the cases, as similarly discovered by Obikoya *et al.* amongst somatizing patients consulting in a primary care setting.<sup>18</sup> Sleep difficulty is

a recognized symptom of somatization, as elaborated in the PHQ-15-a validated screening tool in primary care practice.<sup>18,19,23</sup> Generalized burning sensation-described as heat in the body and in the head, generalized peppery and internal biting sensation were also some of the presenting complaint which were prevalent exclusive of the study tool.<sup>17</sup> Interestingly, the core complaints resemble the kinds of symptoms that are commonly seen by primary-care physicians and hence the need for increase awareness to differentiate physical from psychosomatic origin.<sup>6,18</sup>

Approximately 54% had comorbid medical disorders, of which cardiovascular symptom was the most prevalent. Other relatively associated comorbidity included complaints related to the female genitalia and musculoskeletal complaints, with smaller percentages spread across other organ-system. (Table 3). This pattern of medical comorbidity rates is similar to that of a study which discovered that somatization can have co morbidities in 44% to 94% of cases seen.<sup>15</sup> Perhaps the reason for encounter are these observed comorbidity but it is worthy of note that more than half of the somatizing patients had other medical ailments aside somatization, hence the need to properly evaluate these patients rather than them be viewed as “difficult” patients. The BMI (Table 4) was assessed to rule out the predisposing risk factor of obesity to chest, heart and musculoskeletal symptoms, which could confound some of the somatization symptoms; this was not of statistical significance as the mean BMI (26.5kg/m<sup>2</sup>) for the somatizers was in the preobese range which is not known to confer any grievous morbidity.<sup>24</sup> Majority of the somatizing patients had blood pressures within the normotensive range, as well as unremarkable results from other test that were carried out on them.

Somatization may be associated with or be difficult to differentiate from concurrent medical illness.<sup>2,15,25</sup> In this study the somatization symptoms which were typically vague were painstakingly evaluated while at the same time the possibility of medical confounders were entertained.

## CONCLUSION

The symptoms common to the somatizers were crawling sensations, unpleasant numbness, headaches, complaint of pounding heart, pains in the limbs, insomnia, generalized burning and peppery sensation. Majority of the respondent were female, with age at onset of somatization below 35 years and at least ten-years duration of symptoms. There was associated comorbidity in a significant proportion which was distinct from the somatization symptoms.

## RECOMMENDATION

It is of utmost importance for primary care providers especially family physicians to be familiar with pattern of presentation of somatization and to be always on the lookout for possible comorbidity. They should ensure a holistic approach to health care delivery at every contact with these patients so as to prevent iatrogenic worsening of the symptoms and ensure effective management.

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