

## On Somatic Symptoms Measurement: The Scale for Assessment of Somatic Symptoms Revisited

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### ABSTRACT

**Background:** Scale for assessment of somatic symptoms (SASS) has been widely used for assessing somatic complaints since many years. With impending changes in the classificatory system on somatoform disorders, we re-assessed the test-retest reliability and inter-rater reliability of SASS. **Materials and Methods:** SASS was administered twice with a gap of 24 h on 20 subjects for test retest reliability. Two clinicians assessed inter-rater reliability on 20 subjects. Kendall tau B and Cronbach's alpha were calculated from the data. **Results:** All of the items except burning sensation, weakness of mind and trembling had strong correlation with values  $> \pm 0.40$  on both test retest and inter-rater reliability; burning sensation and trembling were not reported by any subject. On inter-rater reliability the items constipation, diarrhea, lack of libido weren't scored by any subjects. Cronbach's alpha for test retest was 0.982 and 0.840 indicating good internal consistency. **Conclusion:** Majority of the symptoms in SASS had high correlation in both test retest reliability as well as inter-rater reliability, however few items needs revision.

**Key words:** Reliability, scale for assessment of somatic symptoms, somatic symptoms

### INTRODUCTION

Bodily complaints are often the most common reason for consultation with health professionals. Various terminologies have been used to describe bodily complaints such as somatic symptoms, physical symptoms. The somatic symptoms can occur as a manifestation of any underlying psychiatric illness such as, anxiety, depression, common mental disorders and other stress related disorders. Somatic symptoms when persistent and attributed to presence of a non-existent physical illness and related to psychosocial factors are considered as somatoform disorders. Somatic symptoms

are subjective experiences which cause suffering to the individual.

Measuring and quantifying something which is subjective, which cannot be seen or felt, which is interpreted differently by health professionals, cannot be easy. The interest on measuring somatic symptoms exclusively is relatively recent. According to a recent report, total somatic symptom score provide a predictor of health status and healthcare use over and above the effects of anxiety, depression and general medical illnesses.<sup>[1]</sup> Physical symptoms were measured as a part of other general psychiatric and psychopathology scales and were not considered as important to be measured comprehensively.<sup>[2]</sup> Commonly used scales that have been in use for measuring somatic symptoms and have been described recently.<sup>[2]</sup>

Scale for assessment of somatic symptoms (SASS) has been in use since the mid-1980s until date.<sup>[3-11]</sup> It has been used in assessing somatic symptoms and somatization in different groups of general medical,

Access this article online	
Website: www.ijpm.info	Quick Response Code 
DOI: 10.4103/0253-7176.150807	

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psychiatric and cancer patients.<sup>[3-5]</sup> When used for measurement of somatic symptoms in a medical disorder, such as cancer, besides the severity scores, there is a provision to differentiate if the physical symptoms are purely organic, psychological, both organic and psychological, or neither physical nor psychogenic (idiopathic).<sup>[4]</sup> This scale has been in use for almost a quarter of the century. However, with the on-going changes in the classificatory system on somatoform or somatic symptom disorders and to reevaluate the need for revising/modification of the scale items, the psychometric properties of this scale were studied.

## MATERIALS AND METHODS

The aim of the study was to assess the test retest reliability and inter rater reliability of SASS. The SASS is used to measure the somatic symptoms and their severity in clinical settings. The scale has four subscales namely, pain related symptoms, sensory somatic symptoms, nonspecific somatic symptoms and biological function related symptoms. The severity of somatic symptoms is rated from 0 to 3-0: Absent, 1: Mild, 2: Moderate and 3: Severe. The somatic symptoms are said to be present if the symptoms have occurred during the previous 2 weeks. The full scale is provided in a recent issue of the journal of International Review of Psychiatry 2013.

This study was conducted at National Institute of Mental Health and Neurosciences, Bangalore. A total of 20 subjects with bodily symptoms were approached for the study to assess test retest reliability. SASS was administered after obtaining informed consent. SASS was re-administered after 24 h to the same 20 subjects.

For inter-rater reliability, two clinicians (GD, AD) administered SASS to 20 subjects independently, without being aware of each other's ratings. The sample was drawn from patient's attendants and hospital staff. The data was tabulated. Kendall tau B and Cronbach's alpha was calculated. A value of more than 0.40 was considered as an indicator of strong correlation.<sup>[12]</sup>

## RESULTS

Data was tabulated, entered into excel sheet and data was analyzed. The item wise test retest reliability and inter-rater agreement are given in the Table 1. Two items burning sensation and trembling did not score and could not be commented upon in both test retest and inter-rater reliability. All other items had strong correlation with values  $> \pm 0.40$  on both test retest and inter-rater reliability. Retest of the items had strong

**Table 1: Item wise reliability and inter-rater agreement co-efficient**

Items	Kendall's tau-b test retest	Kendall's tau-b inter-rater
Headache	0.918	0.873
Backache	0.87	0.718
Pain in extremities	0.593	0.584
Abdominal pain	1.000	1.000
Whole body ache	0.629	0.816
Tingling, numbness	0.629	0.863
Heat and cold sensations	0.799	1.000
Palpitations	0.475	0.856
Sensation of 'gas' bloating	1.000	0.686
Weakness of body	0.673	0.714
Weakness of mind		0.112
Giddiness, dizziness, fainting	0.533	0.793
Tiredness, lethargy	0.513	0.490
Lack of sleep	0.636	0.896
Lack of appetite	0.544	0.793
Lack of libido	1.000	
Constipation	1.000	
Diarrhea	1.000	

\*Both time all subjects classified burning sensation and trembling/tremors to the score of zero

correlation with values  $> \pm 0.40$  on both test retest and inter-rater reliability. However, on inter-rater reliability the items constipation, diarrhea, lack of libido was not scored by any subjects. Cronbach's alpha for test retest was 0.982 and 0.840 indicating good internal consistency.

## DISCUSSION

The above study was conducted to reassess the reliability of the tool which has been widely used to measure somatic symptoms.<sup>[3-10]</sup> Since, there are going to be significant changes in the classification of somatoform disorders and focus is on the medically unexplained symptoms, it was pertinent to establish whether the tool maintained its test retest reliability and also inter-rater reliability.

Majority of the somatic symptoms in the SASS had high correlation in both test retest reliability as well as inter-rater reliability, however few items, were not scored, hence, it may imply the need to relook at the items of the SASS.

The item "burning sensation" was not scored possibly because the interpretation would have been as burning pain and hence scored as a pain symptom, or burning sensation in the abdomen could have been subsumed under sensation for gas bloating or it may not be the common symptom. Likewise, tremors could have not been a common symptom too. It is also possible certain symptoms could be more relevant and prevalent

in certain specialty areas such as gastroenterology, cardiology and others.

The observations demonstrated that the tool had high internal consistency. However certain items need revision. Furthermore, the study did not assess the utility of the severity of the symptoms.

It was also noted that the scale did not evaluate symptoms related to reproductive system except for lack of libido. Certain other bodily symptoms were not tapped by the SASS.

The SASS has 20 somatic symptoms and eliciting these and their severity can be time consuming in busy clinics. A brief screening version of SASS would be more useful to apply based on the reliability scores established by the above study.

## CONCLUSION

The SASS has demonstrated a good inter rater and test retest reliability, overall. It has both clinical and research utility. Revisiting the psychometric properties of the SASS, 25 years after it was first described; further suggest the need for revision of the SASS and the possibility of a brief or shorter screening version, for busy outpatient clinics and primary care.

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**How to cite this article:** Desai G, Chaturvedi SK, Dahale A, Marimuthu P. On somatic symptoms measurement: The scale for assessment of somatic symptoms revisited. *Indian J Psychol Med* 2015;37:17-9.

**Source of Support:** Nil, **Conflict of Interest:** None declared