



Somatic Symptoms And It's Relationship With Elderly Population- A Cross-Sectional Hospital-Based Research Study

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Abstract

Psychological states may contribute to physical symptoms by a direct psychophysiological effect or by influencing habit patterns and lifestyle in elderly population.

Aim: - To study the association between Sociodemographic & clinical variables and somatic symptoms in elderly population.

Method: A group of 110 elderly outpatients attended Tertiary healthcare center for 6 months. Patients were assessed with Semi structured proforma that details about socioeconomic details and Clinical profile regarding the disorder and Somatic Symptom scale- 8. All the collected data were statistically validated and plotted as results.

Results: The study involved 110 elderly people, with Marital status, Social support & Socioeconomic status showed significant association with Somatic symptoms and elderly people with $p < 0.05$. The clinical finding like Suicidal ideas, sleep disturbances, drug adherence and stressors showed significant association with elderly somatic symptoms ($p < 0.05$).

Conclusion: This study concludes that, disturbances in socioeconomic and clinical domains of elderly people were associated with higher scores of somatic symptom.

Keywords: Geriatric, Social support, Suicidal ideas, Somatic symptoms

Introduction

Somatic symptoms were the presentation of physical symptoms in the absence of organic pathology, or the amplification of physical complaints accompanying organic disease beyond what can be accounted for by physiology. (1) Geriatric group of people face various disturbing factors which can lead to escalate the mental health problems and paving way to complications of medical comorbid disorders or worsening of physical symptoms. Certain risk factors that may contribute increasingly to disturb mental health functions were somatic symptoms, and medical

comorbid disorders like Type 2 Diabetes Mellitus, Hypertension, etc. Nearly, one in four senior citizens is affected by mental health disorders like depression, Anxiety, and dementia. (2) These factors invariably leads to poor quality of life, reduced activity of daily living (ADL), and dysfunction in social interaction and community participation. (3)

In a study, the most devastating outcome of financial burden, various chronic medical conditions, under diagnosed or undiagnosed disorders and untreated

pain, and sleep disturbances are all experienced by underserved African American and Latino older adults, and these factors directly affects the quality of life rural elderly population. (4) The old age people has its own vulnerabilities based on age, sex, education and socioeconomic status. (5)

Depression and anxiety are associated with increased health care utilization, increased disability, and worsens the quality of life among geriatric population. (6) Death related anxiety is well associated with increased somatic symptoms intensity. (7) In a German study done by Hessel et al, showed that somatoform pain is very commonly seen in old age. (11)

There are a minimal number of studies done in India that focused on geriatric mental health. To identify those factors in South Indian elderly populations that were associated with somatic symptoms. To study the association between Sociodemographic & clinical variables and somatic symptoms in elderly population. The Objectives of the study was to find the association between Sociodemographic variables and somatic symptoms in elderly population and to study the association between Clinical variables and somatic symptoms in elderly population.

Materials And Methods :

After getting the Institutional Human Ethics Committee (IHEC) approval, the study was initiated. All participants voluntarily consented to participate and signed the consent forms before entering the study. During data collection, ethical considerations were respected by respecting the confidentiality and anonymity of participants; all participants were protected against any harm; the team of healthcare professionals composed of a registered nurse, a mental health nurse and a medical doctor was in place to assist any person in need.

This is a descriptive Cross-sectional study, the study was conducted among the elderly individuals attended Psychiatry OPD, Tertiary Hospital and Research and Institute. The study included first 110 elderly individuals attended Tertiary Hospital and Research Institute within six months period of duration. The inclusion criteria was those patients of age group more or equal to 60 years both the genders and patients willing to give written Informed consent. The exclusion criteria was those patients with the presence

of acute, severe systemic illnesses or with severe psychiatric illness or patients with Dementia, Intellectual disability & Uncooperative patients. The Materials used were a Self-structured proforma for Sociodemographic and clinical details of patients, Modified B.G. Prasad Socioeconomic Scale and Somatic Symptom scale- 8. Descriptions of the materials are Self-structured proforma for collecting sociodemographic details and clinically relevant data from the participated individual. The Modified B.G. Prasad Socioeconomic Scale (2024) was used to find the socio-economic status (SES) of an individual or a family is one of the primary factors influencing the health, and CPI-IW is required to compute the SES of a family. Modified BG Prasad scale is one of the most widely used scale to measure the SES of families, both in urban and rural areas. BG Prasad's classification was introduced in 1961 considering the base of the consumer price index (CPI) for 1960 as 100 and Per capita income as per modified classification for May 2021. The Somatic Symptom scale- 8 (8) It is a 8-item scale that elicits the last 7 days status of the patient and the scoring done by the Patient was not or only minimally bothered (0 to 3). Increasing scores indicate incrementally greater levels of discomfort: low (4 to 7); medium (8 to 11); high (12 to 15); very high (16 to 23).

The study was conducted in Psychiatry department of Tertiary healthcare hospital and Research Institute after obtaining approval from Institutional ethical committee. Elderly Patients attended Psychiatry OPD of Tertiary Hospital and Research Institute for a study period of 6 months were taken into study and evaluated. All participants gave informed written consent. Those patients who were satisfying the inclusion & exclusion criteria were taken into the study and evaluated with self-structured proforma, every details regarding Sociodemographic and clinical data were collected. Then, to those individuals the somatic symptom scale – 8 psychometric assessments was done by a well-trained Psychiatrist. With the information collected, results were framed.

Statistical Analysis :

Using the SPSS (V.27) the Data analysis was done. The Outliers and Normality of distribution for Data was checked. Categorical data were described with percentages and numbers, and continuous data were described with means and SD or median.

Demographic factors and clinical data associated with somatic symptoms was assessed using the Mann–Whitney U test for 2 groups & #Kruskal–Wallis test for 3+ groups for testing significance with $p < 0.05$ statistically significant & $p < 0.001$ as statistically highly significant.

Results:

The study involved 110 elderly people with the age equal or above 60 years, with average age as 66 years, with almost gender equivalent sample population with 53 males and 57 females. The mean Somatic Symptom Scale–8 (SSS-8) scores across sociodemographic variables were presented in Table 1. The mean SSS-8 score did not differ significantly between age groups (60–69 years: 10.1 ± 6.9 vs ≥ 70 years: 9.6 ± 7.4 ; $p = 0.63$). Gender comparison also showed higher somatic symptom burden among females (11.5 ± 6.6) compared to males (8.3 ± 7.1), which approached statistical significance ($p = 0.05$). The Sociodemographic profile showed, significant association between marital status and somatic symptom score with significant p value of < 0.05 , elderly people living as single has increased SSS-8 scores than married people with 8.3 ± 6.4 & 12.3 ± 7.2 scores respectively. A significant gradient was observed with respect to social support. Participants with poor social support had the highest mean SSS-8 scores (13.1 ± 7.0), followed by fair (9.0 ± 6.1) and good social support (7.6 ± 6.8), with the difference being statistically significant with p value of 0.03. Educational status and occupational status were not significantly associated with somatic symptom severity with p value of 0.16 and 0.12, respectively, but the mean scores were observed to be high among illiterate (11.5 ± 6.6) and non-working participants (11.5 ± 7.0). Socioeconomic status showed a significant association, with participants belonging to lower socioeconomic classes (Class III–V) had higher SSS-8 scores (11.0 ± 6.5) compared to those in higher classes with Class I–II showed scores of 7.9 ± 7.6 , with significant p value < 0.05 .

From Table 2, that showed the association between clinical variables and somatic symptom burden. Participants with sleep disturbance had significantly higher SSS-8 scores with 12.8 ± 6.4 as compared to those without sleep disturbance with 7.6 ± 6.8 ; with p value of < 0.05 . A significant association was observed with lifetime stressors, where participants

with multiple stressors had the highest somatic symptom scores of 11.7 ± 5.7 , followed by those with a single stressor of 10.7 ± 7.5 , while those without stressors had the lowest scores of 6.0 ± 6.1 scores; with the significant p value of < 0.05 . Substance abuse was not significantly associated with somatic symptom severity with p value of 0.53. Participants with a history of suicidal ideation or attempts had significantly higher somatic symptom scores of 13.0 ± 5.8 as compared to those without such history (9.2 ± 7.1 ; $p = 0.03$). Drug adherence for medical comorbidities showed a strong association with somatic symptoms. Participants with poor adherence had the highest SSS-8 scores with 14.8 ± 6.4 , followed by fair (10.4 ± 6.1) and good adherence (6.3 ± 6.3), which was highly statistically significant ($p < 0.001$).

Figure 1 shows the pictorial representation with bar diagram, that included both the tables, Sociodemographic details & Clinical variables and its association with Somatic symptoms (SSS-8 Inference).

Discussion:

The prevalence of Somatic Symptoms Disorder in the geriatric population was higher than that in the non-elderly with the prevalence of 63.2% and 45.3% respectively. The findings indicate that somatic symptom severity in the elderly is strongly influenced by psychosocial and clinical factors rather than age or educational status alone, reinforcing the multidimensional nature of somatization in late life. Gender differences observed in this study, with females reporting higher somatic symptom scores, are consistent with existing literature from India. Medium Somatic symptom severity (57%) was more prevalent in females. Prevalent psychiatric co-morbid conditions included depression (mild: 22.0%, moderate: 26.5%), moderate anxiety (41.5%), and moderate stress (26%) were seen. (14) Marital status emerged as a significant determinant, with single individuals exhibiting higher somatic symptom burden. This finding highlights the protective role of marital and family support in the Indian context. Socioeconomic status was also significantly associated with somatic symptoms, with individuals from lower socioeconomic classes demonstrating higher scores. This may reflect increased exposure to chronic stress, financial insecurity, limited access to healthcare, and higher prevalence of untreated comorbidities. Although

education and occupational status did not show statistically significant associations, the higher mean scores among illiterate and non-working participants suggest a possible trend that may reach significance in larger samples. Psychiatric comorbidity of depression or anxiety disorders was 3.7 times higher than would be expected in the general population. (9) In a German study, the differences between "young olds" and "old olds", the somatoform pain increased with increasing age. (11) In a European study done by Maria et al, there was a significant gender difference for pain disorder. (12)

Among clinical variables, sleep disturbance showed a strong association with somatic symptom severity. Sleep problems are both a cause and consequence of somatic and psychological distress, and their presence may exacerbate symptom perception and functional impairment. The significant association with lifetime stressors further supports the role of cumulative psychosocial stress in the development and persistence of somatic symptoms. Participants with multiple stressors had the highest scores, indicating a dose-response relationship. The association between somatic symptoms and suicidal ideation or attempts is clinically important. In a systematic review, somatic symptom disorders were associated with increased risk for suicidal ideation and suicide attempts, with estimates ranging from 24 to 34% of participants who endorsed current active suicidal ideation and 13-67% of participants who endorsed a prior suicide attempt. (13) Higher somatic symptom burden in this group may reflect underlying depression, hopelessness, or unresolved psychological distress manifesting as physical complaints. This finding highlights the need for careful mental health screening in elderly individuals presenting with multiple somatic symptoms. Drug adherence for medical comorbidities showed the strongest association, with poor adherence linked to markedly higher somatic symptom scores. This relationship may be bidirectional: increased symptom burden could reduce adherence, while poor adherence may lead to worsening of physical conditions and symptom amplification. Due to aging, urbanization, population growth and increasing prevalence of physical inactivity leading to obesity the risk of diabetes and other chronic comorbidities continues to increase worldwide. (10) This finding has significant implications for clinical practice, emphasizing the need to assess adherence when

evaluating somatic complaints. Substance use did not show a significant association with somatic symptoms in this study, which may be due to lower prevalence in the elderly population or underreporting. Similarly, the lack of association with age suggests that somatic symptom burden may be more closely related to functional and psychosocial factors than chronological age. The limitations of the study were, the results cannot establish a causal relationship between the variables as it was a cross-sectional design. The findings cannot be generalized, as it was a single centred population involved hospital-based study. The study took purposive sampling method, so could have selection bias.

Conclusion:

The study findings highlight that somatic symptoms in the elderly were closely linked not only to physical health but also to underlying psychosocial vulnerability and mental health factors. The absence of significant associations with age, education, occupation, and substance use further suggests that psychosocial determinants may play a more critical role than demographic characteristics alone. Overall, the study underscores the need for a holistic, integrated approach in geriatric care, incorporating routine screening for somatic symptoms alongside assessment of mental health, social support, and treatment adherence. Early identification and targeted interventions addressing these domains may help reduce symptom burden and improve quality of life among the elderly.

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Tables And Charts:

Table 1- Sociodemographic details and its association with Somatic symptoms severity (SSS-8 Inference).

S.NO	Sociodemographic data		Somatic symptoms severity Score – Mean (SD [#])	p value
1	Age (in years)	60 - 69	10.1 (6.9)	0.63
		70 & above	9.6 (7.4)	
2	Gender	Male	8.3 (7.1)	0.05
		Female	11.5 (6.6)	
3		Married	8.3 (6.4)	0.02*

	Marital status	Single	12.3 (7.2)	
4	Social support	Good	7.6 (6.8)	0.03*
		Fair	9 (6.1)	
		Poor	13.1 (7)	
5	Education	Degree	9.7 (8.8)	0.16
		Schooling	9.5 (6.8)	
		Illiterate	11.5 (6.6)	
6	Work	Working	7.9 (6.6)	0.12
		Not working	11.5 (7)	
7	SES	Class 1 & 2	7.9 (7.6)	< 0.05*
		Class 3- 5	11 (6.5)	

Descriptive statistics was used to find mean & Standard Deviation #.

Mann–Whitney U test for 2 groups & #Kruskal–Wallis test for 3+ groups for testing significance with *p<0.05
**p<0.001 as statistically significant.

Table 2- Clinical variables and its association with Somatic symptoms (SSS-8 Inference).

S.NO	Clinical variables	SSS-8 Score Mean (SD)	p value
1	Sleep Disturbance		
	Present	12.8 (6.4)	< 0.05*
	Absent	7.6 (6.8)	
2	Lifetime Stressors		
	Absent	6 (6.1)	< 0.05*
	Single	10.7 (7.5)	
	Multiple	11.7 (5.7)	
3	Substance abuse		
	Yes	8 (6.1)	0.53
	No	10.6 (7.2)	
4	Suicidal ideas/Attempt in past		
	Present	13 (5.8)	0.03*
	Absent	9.2 (7.1)	
5	Drug adherence for medical comorbidity		

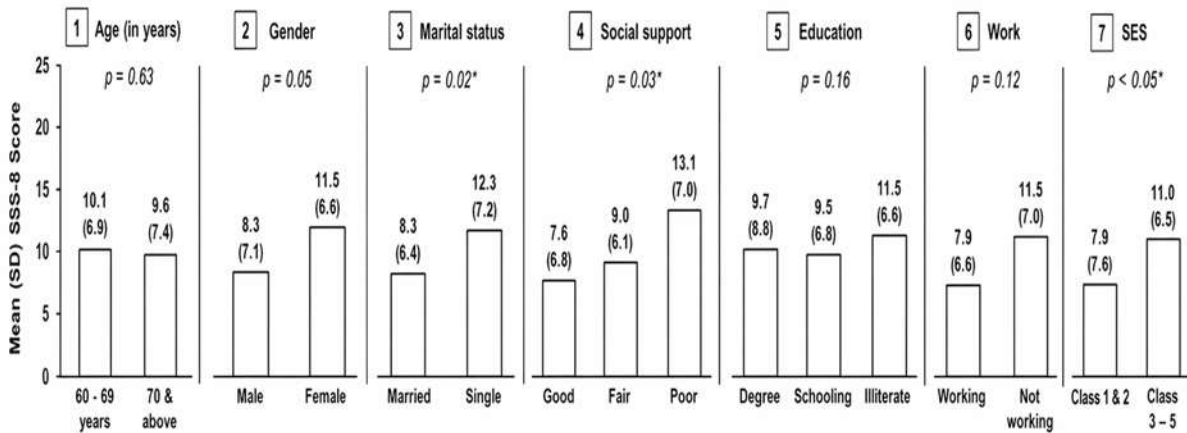
Good	6.3 (6.3)	< 0.001 **
Fair	10.4 (6.1)	
Poor	14.8 (6.4)	

Descriptive statistics was used to find mean & Standard Deviation.

Mann–Whitney U test for 2 groups & #Kruskal–Wallis test for 3+ groups for testing significance with *p<0.05 **p<0.001 as statistically significant

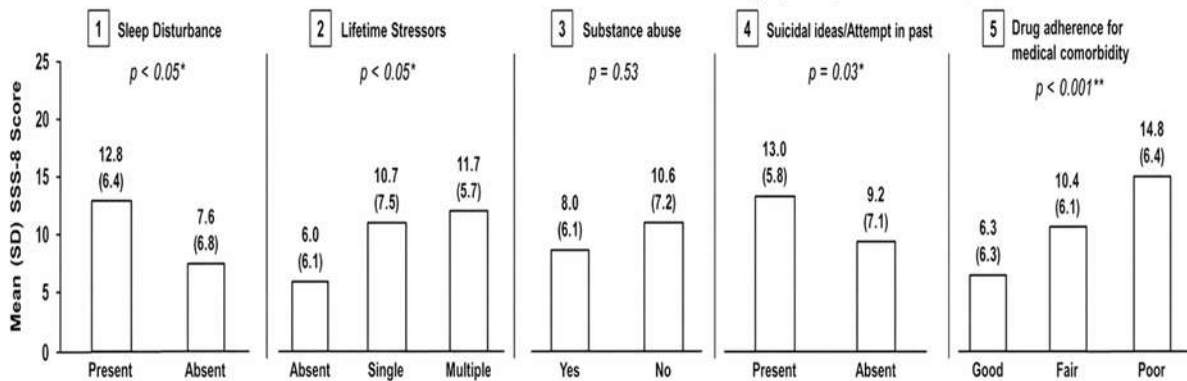
Figure 1- Sociodemographic details & Clinical variables and its association with Somatic symptoms (SSS-8 Inference) with a bar diagram representation.

Table 1. Sociodemographic details and its association with Somatic symptoms severity (SSS-8 Inference)



Descriptive statistics was used to find mean & Standard Deviation #. Mann–Whitney U test for 2 groups & #Kruskal–Wallis test for 3+ groups for testing significance with *p<0.05 **p<0.001 as statistically significant.

Table 2. Clinical variables and its association with Somatic symptoms (SSS-8 Inference)



Descriptive statistics was used to find mean & Standard Deviation. Mann–Whitney U test for 2 groups & #Kruskal–Wallis test for 3+ groups for testing significance with *p<0.05 **p<0.001 as statistically significant.