



The prevalence and its correlates of somatization disorder at a quaternary mental health centre



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ABSTRACT

Introduction: Somatization Disorder (SD) is known to cause disability and impact the quality of life due to psychological and somatic distress. Though it is a Common Mental Disorder (CMD), the disorder tends to visit all levels of health care, among which prevalence of SD at tertiary care is 10.1%.

Aims: To estimate current prevalence and its correlates of socio-clinical factors in SD at a quaternary mental health centre (QMHC).

Methods: Total of 422 adult subjects were selected through systematic random sampling at first contact psychiatry outpatient clinic. Subjects were interviewed with Mini International Neuropsychiatric Interview Plus version 5.0.0, Clinical Global Impression Severity Scale and Sheehan Disability Scale.

Results: Current prevalence of SD was 5%. Significant correlates are observed with median age of 40.5 years, female, married, < 5 years of education, monthly income of < ₹ 10,357(85.5%) and lower socioeconomic status (75%).

Discussion: There is high prevalence of SD even at QMHC. The higher prevalence among adult population in this setup reflect the impairment of working population which invariably impact on national economy.

Conclusion: Poverty continues to be a major contributing factor to SD causing double impact on the economy by affecting the working population the most.

1. Introduction

Somatization disorder (SD) is known to cause disability and impact the quality of life due to psychological and somatic distress (Shankar et al., 2006; Shidhaye and Patel, 2010). Earlier epidemiological studies have attempted to scale the burden of SD with Epidemiologic Catchment Area study found a lifetime prevalence of 0.1% (Vos, 2016) but subsequent studies failing to provide importance to this field (Kessler et al., 1994, 2005, 2007). With time, due to evolving classification systems on somatic symptoms and increasing magnitude at primary care, data at this level emerged across various countries (Spitzer et al., 1994; Ansseau et al., 2004). Subsequently, a meta-analysis on SD attending primary care found its prevalence ranging from 0.8% to 5.9% (Haller et al., 2015). In India, the prevalence of SD was 10.1% among all Somatoform Disorders at tertiary care centres of General Hospital Psychiatry Units (GHPU) (Avasthi et al., 2008; Grover and Kate, 2013). The disorder has shed money via hours and days lost at work, treatment expenses and unemployment affecting both individual and the

country's economy as a vicious cycle (Sansone and Lori, 2010). Supporting this statement, a systematic review in 2012 reported this disorder being 11–21% among age group less than 50 years suggesting that majority affected are of the working population (Hilderink et al., 2013). Understanding the prevalence, distribution and disability of this disorder at different levels of health care helps in reducing the economic impact of the patients as well as on the health care system by sensitizing appropriate usage of human and other resources. With even Global Burden of Diseases studies; which consider such non-fatal health outcomes, fails to consider SD so as to provide data for influencing promotion and monitoring of individual and public health (Bourdon et al., 2019; Ansseau et al., 2004; Harvey et al., 2013; Vos, 2016). There are lack of data about prevalence of SD in QMHC. Hence, aim of this study is to estimate prevalence of SD and its correlates of patients attending outpatient clinic of QMHC.

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Table 1
Distribution of socio-demographic characteristics with SD (N = 400).

Socio-demography		SD Positive Number (%)	SD Negative Number (%)	Test Statistics	P value
Age in years		40.5 (12) [#]	34 (17) [#]	2259	0.002*
Gender	Male	3 (15)	225 (59)	15.151	< 0.001*
	Female	17 (85)	155 (41)		
Demography	Urban	8 (40)	205 (54)	1.485	0.223
	Rural	12 (60)	175 (46)		
Marital status	Single	0 (0)	120 (31)	9.146	0.01*
	Married	17 (85)	227 (60)		
	Others	3 (15)	33 (9)		
Education	0–5 years	14 (70)	120 (31)	13.627	0.001*
	6–12 years	6 (30)	189 (50)		
	More than 12 years	0 (0)	71 (19)		
Occupation	Unemployed	0 (0)	38 (10)	6.374	0.144
	Unskilled/semiskilled/skilled	16 (80)	204 (54)		
	Clerical/semi-professional	4 (20)	111 (29)		
	Professional	0 (0)	27 (7)		
Currently employed	Yes	15 (75)	211 (55.5)	2.932	0.087
	No	5 (25)	169 (44.5)		
Monthly income**	Less than ₹10,357	17 (85)	210 (55)	6.962	0.03*
	₹10,357–₹41,430	2 (10)	136 (36)		
	More than ₹41,430	1 (5)	34 (9)		
Economic status**	Lower	15 (75)	180 (47)	6.229	0.04*
	Middle	5 (25)	171 (45)		
	Upper	0 (0)	29 (8)		

[#] Median (IQR).

** Singh T, Sharma S, Nagesh S. Socio-economic status scales updated for 2017(23).

2. Aims

To study the current prevalence and its socio-clinical correlates of SD in patients attending first contact psychiatry outpatient clinic of a QMHC.

3. Methods

A cross-sectional study carried out at first contact psychiatry outpatient clinic of National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru, India. It is an institute of national importance accorded by Act of Parliament of India and has been a pioneer in the field of Clinical Neurosciences which includes Psychiatry, Neurology and Neurosurgery and as a nodal centre for evolving national health policies. With an inpatient capacity of 550 beds, the Department of Psychiatry, NIMHANS has been catering for the promotion of mental health and treatment of psychiatric disorders alongside postgraduate medical education, training and research. The Institute is a quaternary care centre which is a generic term used for hospitals that provide subspecialty services which in a mental health setup includes specialty mental health clinics like Schizophrenia, Perinatal Psychiatry and OCD clinics.

3.1. Study population

This study consisted of subjects belonging to rural and urban demography from various parts of the country as the setting where the study was carried out at NIMHANS, Bengaluru, India. First contact outpatient consultations include patients who came as direct/walk-in, referrals and second opinions.

3.2. Sampling

Assuming the proportion of population with SD among all Psychiatric disorders, with 3% absolute precision and 95% confidence level, the minimum sample size required is 384 which is rounded to 400.

Subjects are screened for Psychiatric disorders initially by a General

Duty Medical Officer and then reach the first contact psychiatry outpatient clinic where a total of 400 subjects were recruited using systematic random sampling with an interval of 5. The Inclusion criteria were both sexes of age 18 years and above who were willing for written informed consent. The exclusion criteria were subjects who refused to give consent and not amenable for detailed evaluation. The ethical approval for the study was obtained from the Institute Ethics Committee.

3.3. Interview and procedure

The recruitment was carried out by first author (KRC) after obtaining written informed consent. Subsequently they were administered Diagnostic and Statistical Manual for Mental disorders (DSM – IV TR) criteria through Mini International Neuropsychiatric Interview Plus version 5.0.0. (MINI PLUS) along with specially designed socio-clinical and demographic proforma. MINI Plus is a short structured diagnostic interview, developed based on DSM-IV TR and has been validated in the diagnosis of SD (Sheehan et al., 1998). Subjects who were only diagnosed primarily with SD were assessed further with the tools mentioned below. The tools included Clinical Global Impression Severity (CGI-S) scale which is a brief assessment tool in psychiatry to assess the illness severity. The scale has been validated for use in SD (Bandelow et al., 2006; Busner and Targum, 2007). Sheehan Disability Scale (SDS) is a brief, patient rated, measure of disability and impairment in three inter-related domains, i.e. work/social /family life (Leon et al., 1997).

3.4. Data analysis

The data were entered manually and double checked and were also scrutinized to identify out of range values that were examined. Statistical analysis was done using IBM SPSS version 22. The current prevalence of SD was identified and test of association was done using Pearson's Chi-square test or Fisher's Exact Test if the expected frequency of 20% of cells is less than 5. The average age of SD was tested using Mann-Whitney test. The level of significance was fixed at 5%.

Table 2
Correlates of Clinical profile with Somatization Disorder (N = 117).

Clinical profile		SD Positive Number (%)	SD Negative Number (%)	Chi-square value	P value
Comorbid SUDs	Yes	1 (5)	34 (35)	7.142	0.008*
	No	19 (95)	63 (65)		
Comorbid CMDs	Yes	6 (30)	30 (31)	0.007	0.935
	No	14 (70)	67 (69)		
Type of Comorbid CMDs	MDD	0 (0)	7 (7)	13.237	0.05*
	Dysthymia	2 (10)	1 (1)		
	Anxiety disorder	3 (15)	21 (22)		
	Multiple CMDs	1 (5)	1 (1)		
	No comorbid CMDs	14 (70)	67 (69)		
Comorbid physical condition	Yes	8 (40)	30 (31)	1.283	0.607
	No	12 (60)	67 (69)		
Type of comorbid physical condition	Cardiovascular disease	3 (15)	9 (10)	1.083	0.740
	Endocrine disease	2 (10)	7 (7)		
	Others	2 (10)	8 (8)		
	More than one disease	1 (5)	4 (4)		
	None	12 (60)	69 (71)		
Family history of psychiatric illness	Yes	4 (20)	24 (25)	0.205	0.779
	No	16 (80)	73 (75)		
Type of family history of psychiatric illness	CMDs	4 (20)	9 (9)	4.857	0.358
	SMDs	0 (0)	12 (12)		
	SUDs	0 (0)	3 (3)		
	None	16 (80)	73 (76)		
Family history of physical illness	Yes	9 (45)	59 (61)	1.706	0.192
	No	11 (55)	38 (39)		
Type of family history of physical illness	Cardiovascular disease	3 (15)	12 (12)	5.576	0.153
	Endocrine disease	2 (10)	12 (12)		
	Others	3 (15)	8 (8)		
	More than one disease	1 (5)	27 (28)		
	None	11 (55)	38 (40)		
CGI-Severity	None to mild	7 (35)	28 (29)	0.328	0.849
	Moderate	9 (45)	46 (47)		
	Severe to extreme	4 (20)	23 (24)		
SDS – work domain	None	0 (0)	3 (3)	0.635	1.000
	Mild to moderate	13 (65)	61 (63)		
	Severe to extreme	7 (35)	33 (34)		
SDS – social domain	None	0 (0)	0 (0)	2.816	0.093
	Mild to moderate	17 (85)	64 (66)		
	Severe to extreme	3 (15)	33 (34)		
SDS – family domain	None	0 (0)	0 (0)	2.077	0.150
	Mild to moderate	17 (85)	67 (69)		
	Severe to extreme	3 (15)	30 (31)		
Days unproductive	Upto 3 days	5 (25)	22 (23)	1.538	0.697
	4–6 days	0 (0)	7 (7)		
	All 7 days	15 (75)	68 (70)		
Days lost	Upto 3 days	15 (75)	65 (67)	0.907	0.498
	4–6 days	1 (5)	3 (3)		
	All 7 days	4 (20)	29 (30)		

4. Results

4.1. Sample characteristics

Of the 422 subjects approached, 400 consented for the study (94.8%) and 22 (5.2%) refused. The average age (\pm SD) of consented patients was 36.4 years \pm 11.5 with a range 18–80 years. Consultations were from urban (53.3%, n = 213) and rural (46.7%, n = 187) population with males (57%, n = 228) comparatively higher than females (43%, n = 172). 61% (n = 244) were married with education of 0–5 years being 33.5% (n = 134) and 6–12 years being 48.8% (n = 195) with most belonging to unskilled/semiskilled and skilled jobs (55%, n = 220) followed by clerical/semi-professional jobs (28.7%, n = 115). 56.8% (n = 227) earned a monthly income of less than ₹10,357 followed by ₹10,357 to ₹41,430 (34.5%, n = 138) with 48.8% (n = 195) and 44% (n = 176) belonging to lower and middle socio-economic status respectively.

4.2. Prevalence and correlates of somatization disorder

Current prevalence of SD in this study was 5% (20 out of 400 assessed patients). The median age of SD was found to be 40.5 years (IQR = 12; p = 0.002). It was found more prevalent among females (85%; $\chi^2 = 15.15$; p < 0.001), married (85%; $\chi^2 = 9.15$; p = 0.01) subjects, education of 0–5 years (70%; $\chi^2 = 13.63$; p = 0.001) with monthly income of less than ₹ 10,357 (85%; $\chi^2 = 6.96$; p = 0.03) from lower (75%; $\chi^2 = 6.23$; p = 0.04) socio-economic status. The clinical profile which are significant correlates with SD were comorbid Substance Use Disorders (SUD) by 95% ($\chi^2 = 7.14$; p = 0.008) without a diagnosis of SUD. The disorder was also found to be comorbid with other CMD by 30% ($\chi^2 = 13.23$; p = 0.05) of which 10% were Dysthymia, 15% were anxiety disorders and 5% with multiple CMD. The clinical profile was studied among only 117 subjects who were diagnosed with any CMD which includes Depression, Dysthymia, Generalized Anxiety Disorder, Panic Disorder, Social Phobia, Agoraphobia and Somatization Disorder. The following tables 1 and 2 show the overall results of the study: (Tables 1 and 2).

5. Discussion

The current prevalence of SD was found to be 5% comparable to the global and national level data across different levels of care/settings (Bourdon et al., 2019; Avasthi et al., 2008; Grover and Kate, 2013; Haller et al., 2015). The finding that it was more prevalent among the age group of 31–45 years (60%) which is the majority of working population reflects the impact on the economy. Adding to earlier findings that poverty is the major factor influencing CMDs which includes SD (Patel et al., 1998), most in this study were with education level of less than 5 years (70%) and earning a monthly income of less than ₹10,356 (85.5%) from a lower socio-economic background (75%); warranting further amendment in policies at administrative level. Almost all (95%) cases were not found to have been using substance, however the possibility of under-reporting due to stigma cannot be ruled out as most were married women. These finding is similar to what the previous systematic review at tertiary care level (Hilderink et al., 2013; Katharine et al., 2014) and the cross-sectional study at Chandigarh (Avasthi et al., 2008) had noticed; i.e. found to be more among women (60%) compared to men, married (87.9%) who are either housewives or unemployed (60%) and if at employed; then 23% belonged to the skilled/unskilled/semiskilled work. Overall, there is a clear deficit in ability to compare the results with previous studies due to lack of studies specific on SD rather as Somatoform Disorders as a general entity at corresponding levels of health care (Grover and Kate, 2013; Hilderink et al., 2013; Haller et al., 2015).

Limitations of this study includes availability of speciality clinics like Schizophrenia Clinic, Obsessive Compulsive Disorder Clinic and Centre for Addiction Medicine at the institute might have caused bias in the clinic sample. Subtypes of Somatoform disorders other than SD were not assessed in this study. The study provides data on the burden of SD at higher centres thereby influencing contemporaries to work in similar area across levels of health care and influence policy making in a similar way.

6. Conclusion

The study was a first attempt to provide the prevalence and disability of SD at a QMHC setting from India with current prevalence of 5%. Poverty continues to be a major contributing factor to SD causing double impact on the economy by affecting the working population the most.

Role of funding source

None.

Author contribution

All the authors have contributed and approved the final manuscript.

Conflict of interest

The authors declare no conflict of interest.

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