**INTERNATIONAL JOURNAL
OF CURRENT RESEARCH**

REVIEW ARTICLE

QUALITY OF LIFE AND HEALTH CARE UTILIZATION IN PATIENTS HAVING SOMATOFORM DISORDER

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ABSTRACT

Several studies show a high prevalence of somatoform disorders in general population. Patients with somatoform disorders have severe functional impairments and poor QOL resulting in higher health care utilization and significant suffering from illness related symptoms. A cross sectional study was undertaken on a purposive consecutive sample of 100 subjects with diagnosis of somatoform disorder to assess the Quality of Life and health care utilization. Tools used were WHO Quality of Life Bref tool and a structured data sheet. Quality of life was found to be low in all physical, psychological, social relationship and environment domains in comparison with population norms. Low QOL was found to be associated with gender, marital status, education status, occupation status, annual family income and duration of illness. Health care utilization was found to be high, with about 58% of subjects making nearly 40 visits to health practitioners before seeking treatment from study setting. Nearly about 46% of subjects reported spending about Rs. 30,000 each for their treatment outside study setting. The findings suggest that subjects with somatoform disorder made higher health care utilization and reported low QOL which was found to be associated with certain socio demographic factors.

INTRODUCTION

Somatoform disorder is characterised by physical symptoms suggesting physical disorder for which there are no demonstrable organic finding or known physiological mechanisms and for which there is positive evidence or a strong presumption, that the symptoms are linked to psychological factors or conflicts.[i] The life time prevalence of somatoform disorder is estimated to be around 4% in general population.[ii] Somatoform disorder is one of the frequently reported Common Mental Disorder (CMD). In India the prevalence of CMDs is estimated to be around 20-30 per 1000 population which is excluding the one-third of subjects who are with diagnosable psychiatric disorders but are attending outpatient clinic at general hospitals.[iii] Several studies have shown the high prevalence of somatoform disorder in general population.[ii,iv,v] The comorbidity of somatoform disorders with anxiety and depressive disorders is high.[iv] People with somatic complaints have severe functional impairments, poor QOL and present formidable management problems.[vi] The present classifications of somatoform disorder lead to large discrepancies in prevalence and have been criticized due to mixture of principles for diagnostic criteria, non-specific, broad and vague categories and the possibility to use the categories even for other persistent medically unexplained symptoms.[vii] This lack of similarity concerning classification is attributable to the complex nature of somatoform disorders. As a consequence, these disorders are not well understood in medical or in psychopathological terms. Somatoform disorders are common and disabling but they continue to be ignored by mental health professionals and health service planners.[viii] The reason for neglect of somatoform disorder may be the nature of psychiatric diagnosis, which categorizes somatoform disorder with

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hypochondriasis and conversion disorders which are of low prevalence. Secondly, the current preoccupation with serious mental illness i.e, schizophrenia or bipolar illness gives low priority to somatoform disorders. Thirdly, most psychiatrists have limited exposure to medically unexplained symptoms as they do not work in general hospitals and the final reason is due to stigma about consulting a psychiatrist for a physical complaint.[viii] Somatoform disorder present as a challenge for physicians in the medical surgical settings, as the diagnosis is usually a long process of exclusion. Subjects with somatoform disorder are experienced as difficult by their physicians and they report lower satisfaction with care, higher health care utilization and higher functional impairment and low quality of life.[ix]

METHODOLOGY

This is a Cross-sectional, exploratory study where 100 subjects diagnosed with somatoform disorder seeking treatment/ follow-up from selected psychiatric outpatient department were enrolled into the study using purposive, consecutive sampling method. Ethical clearance was obtained from institutional Ethical committee and informed consent was obtained from each participant of the study. A structured questionnaire for demographic profile with selected variables and to assess health care utilization was developed by the researcher. Validity of the tool was established by incorporating suggestions provided by experts from the field of psychiatry. WHOQOL Bref tool was used to assess the QOL. Reliability of the tool was established using test-retest method and Cronbach's alpha was found to be 0.92. Data was analyzed using descriptive statistics i.e. mean, median, percentage, range, standard deviation and inferential statistics i.e. Mann Whitney U test, Kruskal-Wallis and Spearman's correlation test. Level of significance was set as p<0.05. Data were analysed by using statistical package SPSS 15.0 version.

Data obtained from WHO QOL- BREF and WHO DAS II tools were analysed using SPSS syntax developed by WHO for the respective tools.

RESULTS

Table number 1.0, shows the distribution of study subjects based on the socio demographic variables. The mean age of subjects was 33.84 years (SD 9.43). More than half (54%) of subjects were male. About three fourth (76%) of subjects were currently married and most (83%) subjects followed Hindu religion. Most (71%) of the subjects were residing in urban areas. About one fourth (27%) of subjects were illiterate and about the same number (28%) were educated up to class twelve. About 39% of the subjects were homemakers, about one third (36%) of subjects were paid workers, 10% were students, 8% were self employed, and 7% were unemployed due to health reasons. About one fourth (29%) of subjects had an annual family income of Rs 50,000-1 lakh. About one third (37%) reported illness duration of more than four years. Out of the 100 subjects, nearly half (47%) of the subjects had a diagnosis of somatoform pain, 45% had a diagnosis of undifferentiated somatoform disorder and 8% had a diagnosis of somatisation disorder.

QOL of subjects having somatoform disorder

The QOL of study subjects were compared with WHOQOL norms[x]. Table number 2.0, shows the scores of QOL of subjects having somatoform disorder in comparison with WHOQOL-Bref population norms. The WHOQOL- Bref norms, in Domain-1 (Physical) was 73.5 (18.1), Domain-2 (Psychological), 70.6 (14.0), Domain-3 (Social relationship), 71.5 (18.2), Domain-4 (Environment) was 75.1 (13.0). In the current study the mean scores of Quality of life in Domain-1 (Physical) was 43.18(SD 16.74, 95% CI 38.61- 47.75), Domain-2 (Psychological), 49.53(SD15.62, 95% CI 45.27-53.80, Domain-3 (Social relationship), 54.01 (SD 20.20, 95% CI 48.49-59.52) and Domain-4 (Environment), was 47.33(SD 15.76, 95% CI 43.03-51.64). This implies that the QOL of subjects with somatoform disorder was low in all the four domains of WHOQOL-Bref when compared to WHOQOL-Bref norm QOL scores.

Association between scores of QOL and selected variables of subjects

Domain-1 (Physical)

Table number 3.0, shows association of QOL scores in Domain-1 (Physical) and selected variables. The computed Mann whitney U test

Table No. 1.0. Frequency Distribution of subjects according to their demographic details

Demographic characteristics of subjects			N=100 Mean (SD)
Age in years			33.84 (9.43)
Demographic characteristics of subjects			Frequency (%)
Gender	• Male		54 (54)
	• Female		46 (46)
Marital status	• Single	• Never married	22 (22)
		• Widowed	2 (2)
	• Currently Married		76 (76)
Religion	• Hindu		83 (83)
	• Muslim		16 (16)
	• Christian		1 (1)
Place of residence	• Urban		71 (71)
	• Rural		29 (29)
Education status	• Illiterate		27 (27)
	• Up to class 5		21 (21)
	• Up to class 12		28 (28)
	• Graduate/ above		24 (24)
Employment status	• Remunerated work	• Paid work	36 (36)
		• Self employed	8(8)
	• Student		10 (10)
	• Homemaker		39 (39)
	• Unemployed (Health reasons)		7 (7)
Family income per annum (In Rupees)	• < 50,000/-		28 (28)
	• 50,000- 1 lakh		29 (29)
	• 1- 1.5 lakh		15 (15)
	• > 1.5 lakh		28 (28)
Duration of illness	• Up to 2 years		32 (32)
	• 2-4 years		31 (31)
	• >4 years		37 (37)
Diagnosis made at study setting	• Somatoform pain		47 (47)
	• Undifferentiated somatoform		45 (45)
	• Somatisation		8 (8)

Table No. 2.0. Scores of Quality of Life of subjects having Somatoform disorder

N=100

Quality of Life	Population Norms	Scores of Quality of life in current study			95% CI (current study)
	Mean (SD)	Mean (SD)	Median	Range	
• Domain-1 (Physical)	73.5 (18.1)	43.18 (16.74)	39.28	3.57- 82.14	38.61-47.75
• Domain-2 (Psychological)	70.6 (14.0)	49.53 (15.62)	45.83	8.33-83.33	45.27-53.80
• Domain-3 (Social relationship)	71.5 (18.2)	54.01 (20.20)	50.00	16.67-100.0	48.49- 59.52
• Domain-4 (Environment)	75.1 (13.0)	47.33 (15.76)	46.87	21.88-90.63	43.03-51.64

Table No. 3.0. Association between Quality of Life in Domain-1 (Physical), Domain-2 (Psychological) and Selected variables of subjects

N= 100

Variables of subjects	Categories	Scores of Quality of life (Physical)			P	Scores of Quality of life (Psychological)			p
		Mean (SD)	Median	Range		Mean (SD)	Median	Range	
Sex[♦]	• Male	43.65 (15.52)	42.85	14.29- 82.14	0.046*	49.61 (14.77)	47.91	25.00- 83.33	0.046*
	• Female	33.85 (14.32)	35.71	3.57-64.29		43.11 (16.05)	43.75	8.33 -91.67	
Marital status[♦]	• Single	46.87 (17.02)	50.00	21.43-82.14	0.541	49.47 (15.70)	50.00	25.00 -75.00	0.541
	• Currently married	36.70 (14.52)	39.28	3.57-67.86		45.72 (15.61)	45.83	8.33 -91.67	
Education status[#]	• Illiterate	32.93 (13.84)	32.14	3.57-64.29	0.023*	43.98 (14.30)	45.83	16.67 -62.50	0.023*
	• Up to class 5	32.48 (13.64)	35.71	3.57-50.00		40.87 (16.11)	37.50	8.33 -70.83	
	• Up to class 12	41.19 (12.87)	39.28	17.86-64.29		45.53 (11.83)	45.83	25.00 -66.67	
	• Graduate/above	49.55 (16.82)	53.57	14.29-82.14		55.90 (17.37)	56.25	25.00 -91.67	
Occupation status[#]	• Paid work	43.35 (15.34)	42.85	3.57-67.86	0.065	50.23 (15.20)	52.08	8.33 -83.33	0.065
	• Self employed	31.69 (16.24)	25.00	14.29-64.29		40.10 (13.16)	39.58	25.00 -62.50	
	• Student	51.78 (18.15)	57.14	25.00-82.14		54.58 (17.17)	56.25	33.33 -75.00	
	• Homemaker	33.42 (12.75)	35.71	3.57-64.29		42.73 (13.77)	45.83	16.67 -62.50	
	• Unemployed	39.79 (14.04)	35.71	21.43-57.14		45.83 (22.43)	37.50	25.00 -91.67	
Family income per annum (In Rupees)[#]	• < 50,000/-	38.01 (13.44)	36.50	14.29-64.29	0.181	48.21 (15.93)	54.16	8.33-75.00	0.181
	• 50,000- 1 lakh	34.96 (18.45)	32.14	3.57-82.14		43.10 (14.31)	41.66	16.67-70.83	
	• 1- 1.5 lakh	35.04 (13.95)	33.14	3.57-53.57		41.94 (12.44)	37.50	29.17-66.67	
	• > 1.5 lakh	46.30 (13.72)	48.21	21.43-67.86		51.19 (17.34)	50.00	25.00-91.67	
Duration of illness (in years)[#]	• Up to 2 years	40.29 (13.79)	39.28	10.71-67.86	0.030*	51.04 (17.92)	54.16	8.33-91.67	0.030*
	• 2-4 years	42.05 (14.68)	39.28	21.43-82.14		47.98 (13.43)	45.83	29.17-75.00	
	• >4 years	35.71 (17.69)	32.14	3.57-64.29		41.66 (14.19)	37.50	16.67-75.00	

*p<0.05   [♦]Mann Whitney U test   [#]Kruskal Wallis test

Table No. 3.1. Association between Quality of Life in Domain-3 (Social Relationship), Domain-4 (Environment) and Selected variables of subjects

N= 100

Variables of subjects	Categories	Scores of Quality of life (Social Relationship)			p	Scores of Quality of Life (Environment)			P
		Mean (SD)	Median	Range		Mean (SD)	Median	Range	
Sex[♦]	• Male	54.62 (20.45)	50.00	16.67- 100.00	0.628	47.33 (16.19)	46.87	21.88- 90.63	0.511
	• Female	52.71 (19.56)	50.00	16.67 -100.00		45.44 (13.98)	46.87	21.88 -93.75	
Marital status[♦]	• Single	52.77 (19.76)	54.16	16.67 -83.33	0.800	49.86 (17.61)	50.00	21.88 -90.63	0.210
	• Currently married	54.05 (20.16)	50.00	16.67-100.00		45.39 (14.27)	46.87	21.88 -93.75	
Education status[#]	• Illiterate	50.92 (17.19)	50.00	16.67 -75.00	0.135	43.28 (10.63)	46.87	21.88 -59.38	0.004*
	• Up to class 5	46.42 (16.99)	50.00	16.67-75.00		39.13 (13.99)	37.50	21.88 -68.75	
	• Up to class 12	57.44 (18.05)	54.16	25.00-100.00		45.98 (12.55)	48.43	21.88 -68.75	
	• Graduate/above	59.02 (25.40)	66.66	16.67 -100.00		57.03 (18.15)	53.12	21.88 -93.75	
Occupation status[#]	• Paid work	55.09 (20.53)	50.00	16.67 -100.00	0.153	46.00 (14.61)	46.87	21.88 -84.38	0.007*
	• Self employed	39.58 (17.10)	41.66	16.67 -75.00		36.32 (12.82)	37.50	21.88 -53.13	
	• Student	61.66 (16.75)	62.50	33.33-83.33		60.93 (13.60)	56.25	46.88 -90.63	
	• Homemaker	53.20 (18.49)	50.00	16.67-100.00		45.51 (12.05)	46.87	21.88 -81.25	
	• Unemployed	54.76 (28.40)	25.00	25.00 -91.67		45.08 (25.82)	46.87	21.88 -93.75	
Family income per annum (In Rupees)[#]	• < 50,000/-	51.78 (18.19)	50.00	16.67-83.33	0.044*	44.86 (14.16)	48.43	21.88-71.88	0.001*
	• 50,000- 1 lakh	46.55 (18.43)	51.00	17.67-83.33		39.00 (10.48)	40.62	21.88-56.25	
	• 1- 1.5 lakh	56.11 (15.57)	58.33	25.00-83.33		46.04 (10.32)	46.87	28.13-68.75	
	• > 1.5 lakh	61.90 (22.84)	66.66	16.67-100.00		56.02 (17.79)	54.68	21.88-93.75	
Duration of illness (in years)[#]	• Up to 2 years	56.25 (17.96)	50.00	16.67-100.00	0.387	47.65 (15.81)	46.87	21.88-93.75	0.112
	• 2-4 years	49.46 (18.87)	50.00	16.67-83.33		51.00 (16.04)	50.00	21.88-90.63	
	• >4 years	55.18 (22.33)	58.33	16.67-100.00		41.63 (12.65)	46.87	21.88-68.75	

*p<0.05   [♦]Mann Whitney U test   [#]Kruskal Wallis test

and Kruskal Wallis test values for association of QOL scores in Domain-1 (Physical) and selected variables reveals that there is significant association of QOL scores with socio demographic variables such as gender (p=0.003, Mann Whitney U test), marital status (p=0.015, Mann Whitney U test), education status (p=0.001, Kruskal Wallis test), occupation status (p= 0.005, Kruskal Wallis test), annual family income (p=0.033, Kruskal Wallis test).

Domain-2 (Psychological)

Table number 3.0 shows association of QOL scores in Domain-2 (Psychological) and selected variables. The computed Mann whitney U test and Kruskal Wallis test values for association of QOL scores in Domain-2 (Psychological) and selected variables reveals that there is significant association of QOL scores with socio demographic variables such as gender (p=0.046, Mann Whitney U test), education status (p=0.023, Kruskal Wallis test), duration of illness (p=0.030, Kruskal Wallis test).

Domain-3 (Social Relationship)

Table number 3.1 shows association of QOL scores in Domain-3 (Social Relationship) and selected variables. The computed Mann whitney U test and Kruskal Wallis test values for association of QOL scores in Domain-3 (Social Relationship) and selected variables reveals that there is significant association of QOL scores with socio demographic variable such as annual family income (p=0.044, Kruskal Wallis test).

Domain-4(Environment)

Table number 3.1 shows association of QOL scores in Domain-4 (Environment) and selected variables. The computed Mann whitney U test and Kruskal Wallis test values for association of QOL scores in Domain-4 (Environment) and selected variables reveals that there is significant association of QOL scores with socio demographic variables such as education status (p=0.004, Kruskal Wallis test), occupation status (p=0.007, Kruskal Wallis test) and annual family income (p=0.001, Kruskal Wallis test).

Health care Utilization in subjects having somatoform disorder

Table number 4.0, shows the details of treatment received outside by the study subjects, before seeking treatment from study setting. Most (95%) of the subjects had consulted general practitioners, 47% had consulted alternative health practitioners (Homeopathy, Ayurveda, Unani, Siddha), 65% of subjects had consulted specialists and 30% of subjects had consulted other health practitioners (faith healers, quacks and self medication). Out of the 65% subjects who had consulted specialists, more than half (53%) had consulted neurologists, 27.69% had consulted gastroenterologists, 18.46% had consulted cardiologists, 15.38% had consulted ENT specialists, 15.38% had consulted orthopaedician and 10.76% subjects had consulted other specialists (pain, dermatology, general surgery, nephrology specialists etc.). Out of the 30% subjects who had consulted other practitioners, 60% had visited faith healers, 20% had visited quacks and 30% were on self medication. More than half (58%) of the subjects had consulted health practitioners about 40 times during the course of illness, before seeking treatment from study setting. With regard to the type of treatment received outside the study setting, all (100%) subjects had received symptomatic treatment sometime during the course of their illness, 47% subjects had received alternative modality of treatment (homeopathy, ayurveda, unani, Siddha), 26% of subjects were told that their illness did not have an organic origin (counseling), 19% had received nutritional supplements and 25% of subjects had received other forms of treatment i.e. antibiotics, anti tuberculosis drugs, anti leprosy drugs and sedatives. Nearly half (46%) of the subjects had spent about Rs 30,000/- each for their treatment outside the study setting. About two fifth (42%) of subjects reported no change in their health condition with the treatment received from outside the study setting. Most (77%) of the subjects reported dissatisfaction with treatment received from outside the study setting. As shown in table number 4.1, With regard to the investigations (blood tests, CT/ MRI scan, X-ray, Ultrasound, Esophageal Gastro Duodenoscopy (OGD)) undergone by study subjects outside the study setting before seeking treatment from study

Table No. 4.0: Frequency Distribution of subjects according to details of treatment received outside study setting

N=100

Details of treatment received outside study setting			Frequency (%)
Type of consultant visited (outside study setting) [†]	• General practitioner		95 (95)
	• Alternative medicine practitioner		47 (47)
	• Specialists		65 (65)
	• Type of specialists visited (n7= 65) [▲][†]	• Gastroenterologist	18 (27.69)
		• Neurologist	35 (53.84)
		• Cardiologist	12 (18.46
		• ENT specialist	10 (15.38)
		• Orthopaedician	10 (15.38)
		• Other specialists	7 (10.76)
	• Other health practitioners		30 (30)
	• Type of other health practitioners visited (n8= 30) [#][†]	• Faith healer	18 (60)
		• Quacks	6 (20)
		• Self medication	9 (30)
Total number of visits made to health practitioners outside the study setting	• Less than 40 visits		58 (58)
	• 40-80 visits		23 (23)
	• More than 80 visits		19 (19)
Type of treatment received outside study setting [†]	• Counseling		26 (26)
	• Symptomatic treatment		100 (100)
	• Alternative treatment		47 (47)
	• Nutritional supplements		19 (19)
	• Others		25 (25)
Expense for treatment (in Rupees)	• 0-30,000/-		46 (46)
	• 30-60,000/-		27 (27)
	• >60,000/-		27 (27)
Effect of treatment	• Temporary relief		39 (39)
	• Worsening		19 (19)
	• No effect		42 (42)
Satisfaction with treatment	• Yes		23 (23)
	• No		77 (77)

[†] Subjects were allowed more than one answer
[▲] Applicable to subjects who had visited specialist (n7=65)
[#] Applicable to subjects who had visited other health practitioners (n8= 30)

Table No. 4.1: Frequency Distribution of Subjects according to details of investigations done outside study setting

			N=100
Details of treatment received outside study setting			Frequency (%)
Investigation done (outside study setting)	• Yes		89 (89)
	• No		11 (11)
Type of investigations done (n_9=89) [†] [▲]	• Blood tests		83 (93.25)
	• CT/ MRI scan		41 (46.06)
	• X-ray		57 (64.04)
	• Ultrasound		44 (49.43)
	• Oesophageal Gastro Duodenoscopy		10 (11.23)
	• Others		28 (31.46)
Number of times investigations done	• Blood tests[#]	• Once	68 (81.93)
		• More than once	15 (18.07)
	• CT/ MRI scan[#]	• Once	41 (100)
		• More than once	0
	• X-ray[#]	• Once	47 (82.46)
		• More than once	10 (17.54)
	• Ultrasound[#]	• Once	32 (72.73)
		• More than once	12 (27.27)
	• Oesophageal Gastro Duodenoscopy[#]	• Once	7 (70)
		• More than once	3 (30)
	• Other investigations[#]	• Once	28 (100)
		• More than once	0

[†] Subjects were allowed more than one answer
[▲] Applicable to subjects who had undergone investigations outside (n_9=89)
[#] Applicable to subjects who had undergone the specific investigation

setting, most (93.25%) of the subjects had undergone blood investigations, nearly half (46%) of subjects had undergone CT/ MRI investigations, more than half (64.04%) of subjects had undergone X-ray investigation, 49.43% of subjects had undergone ultrasound investigation and 31% of the subjects had undergone other investigations i.e. urine investigations, EEG, ECG, doppler studies and blood investigations (thyroid profile, vitamin B_{12}, iron essays etc.). Out of the 93.25% subjects who had undergone blood investigations 18.07% of subjects reported undergoing same investigation more than once. Out of the 64.04% subjects who had undergone X-ray investigation, 17.54% reported undergoing same X-ray investigation more than once. Out of the 49.43% of the subjects who had undergone ultrasound investigation, 27.27% reported undergoing same investigation more than once and out of the 11.23% subjects who had undergone OGD investigation, 30% reported undergoing same investigation more than once.

Conclusion

The findings revealed that the quality of life of patients with somatoform disorder was low in all of physical, psychological, social relationship and environment domains compared to WHOQOL-Bref population norms. Low QOL was associated with gender, marital status, education status, occupation status, annual family income and duration of illness. Nearly 58% of study subjects reported making about 40 visits to health practitioners outside and about 46% of study subjects reported spending about Rupees 30,000/- each on their treatment outside study setting. Of the 100 subjects 47% were found to have a diagnosis of somatoform pain disorder, 45% had a diagnosis of undifferentiated somatoform disorder and only 8% had somatisation disorder. The findings call for several interventions to reduce the neglect of somatoform disorder, such as inclusion of training about identification, referral and management of psychosocial factors underlying somatic complaints at the undergraduate level and also in non psychiatric specialities, establishment of liaison psychiatry services in medical setting and encouraging research in the area, especially to look for effectiveness of ongoing treatment, cost benefit and clinical efficacy.[viii]

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