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An Original Article

Presentation of somatic symptoms and associated abnormal psychosocial situations among children and adolescents

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Summary

Somatoform disorders are common among children and adolescents. As children's verbal skills are relatively undeveloped, it is not surprising that they display somatic symptoms in response to life stresses. The study aimed to delineate the presentation of somatic symptoms, to see the type and frequency of somatoform disorders, and to find out the association of abnormal psychosocial situations among boys and girls. Twenty six somatic symptoms had been recorded. Headache was the most common symptom in both the boys and girls. . Significant sex difference in frequency of somatic symptoms was reported. Ninety six (39.02%) somatic symptoms in boys and 150 (60.98%) somatic symptoms in girls were explored. Both boys and girls reported higher rates of undifferentiated somatoform disorders, 33.33% and 37.50% respectively. Abnormal psychosocial factors were found in majority of the cases and most common was parental overprotection (26.42%). Overall, associated abnormal psychosocial situations were significantly higher among girls than that of boys (P<0.01). It was also revealed that higher rate of abnormal psychosocial factors was found to have causal relationship of higher rate of somatoform disorders among girls than that of boys (Odds ratio=5.68). Among the categories of abnormal psychosocial situations abnormal qualities of upbringing were the most common category (N=22).

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Introduction

Somatoform means 'bodylike' and refers to physical symptoms that have no physiological basis. That means, the persons complain of persistent medical problems for which no underlying physical cause can be found.1 Somatization is common among adolescents.2.A study suggests that somatization is not associated with class, gender, intelligence or ethnicity.3

Data from Primary Care Evaluation of Mental Disorders, 1000 study indicated that 14% of primary care patients met criteria for somatoform disorders, as defined in DSM-III R.4 In the course of a WHO study, in five western German primary care settings, a 4-week prevalence of 28.5% was found for somatoform disorders and it was higher in female patients than in males and the ratio was 2:1.5 A study conducted in National Institute of Mental Health, Dhaka showed that 6.60% of patient attending out-patient department, suffered from somatoform disorders and male: female ratio was 1.4:1.6 Another study in Bangladesh showed that medically unexplained somatic symptoms were very common and these were more in women.7

Childhood is the short time of life and it is determined by the age group, which is from 1 year to 15 years of age.8,9 Adolescence can be loosely defined as the time between childhood and adulthood that begins with the onset of puberty, around 13 years of age and ends somewhere around 18 or 19 years of age.10.8 For the convenience of this study, 6-16 years' age group was included (6-12 years for children & 13-16 years for adolescents). Because, assessment instrument for somatoform disorders, DAWBA was validated for 6-16 years' age group.

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Children with a psychiatric disorder often complain of somatic rather than psychological symptoms. The most common complaints include abdominal pain (stomachache), headache, cough, limb pain, back pain, dizziness and fatigue.[11] In adolescence, girls begin to report more somatic symptoms than boys. Overall, 13.3% of the girls and 11.5% of the boys reported at least one somatic complaint and 1.4% of the children had more than one somatic complaint.[12] A study conducted in a private Child and Adolescent Consultation Centre in Dhaka city showed that somatoform disorders were found 20.5% child and adolescent patients.[13]

In childhood and adolescence, poly-symptomatic presentations (92%) are reported commoner than mono-symptomatic (8%) ones.[14] Somatoform disorders in young adults are frequent, impairing and often associated with the development of other mental disorders.[15]

Overall, somatic complaints were strongly associated with emotional disorders in girls and with disruptive behaviour disorders in boys. In adolescence, girls begin to report more somatic symptoms than boys and this sex difference continues into adulthood. 13.3% of the girls and 11.5% of the boys reported at least one somatic complaint and 1.4% of the children had more than one somatic complaint.[16]

Regarding external stressors- both chronic adversities and acute life events can play a part. Abuse only seems relevant in a small minority of cases; bullying and academic stresses are probably more common contributors.[17] In a community based study in Bangladesh, some factors associated with somatoform disorders were identified. Those were parental overprotection (33.93%), inappropriate academic pressure (16.07%), inappropriate parental pressure (10.11%), failure in examination (10.11%), and change in school (8.93%), intra-familial discord among adults (8.93%).[13]

Methodology

This is a cross-sectional descriptive study conducted at weekly Child Psychiatry Clinic of Psychiatry OPD and Pediatrics OPD in Bangabandhu Sheikh Mujib Medical University (BSMMU) among children of 6-16 years' age group from June to December in 2003. Total 450 respondents were included in this study, 350 from Pediatric OPD and 100 from Child Psychiatry Clinic. Children and adolescents with organic disorders, pervasive developmental disorders, mental retardation and psychotic disorders were excluded from the study. 53 samples were

found suffering from somatoform disorder during the study period. Multi-axial diagnosis of ICD-10[18], the Development And Well-Being Assessment (DAWBA)[19] and Socio-demographic questionnaire were used as instruments.

At first, respondents were selected by random systematic sampling. Prior to supplement of semi-structured questionnaire, informed consent was taken from them and/or one parent. Semi-structured questionnaire was used to collect data from selected respondents. The structured interview was carried out by somatoform section of The Development And Well-Being Assessment (DAWBA)[19] to assess the cases of somatoform disorders. The samples were tested clinically by criteria of ICD-10 for clinical use. Analysis was done by SPSS. The validity of the test was done by using x^2 (chi-squared) test.

Results

Out of 450 respondents, 53 children and adolescents of somatoform disorders were found. Among them 23 were children and 30 adolescents. Findings of the study were given thereafter. Table-1 shows that 11.78% cases of somatoform disorders were found. Out of total respondents, somatoform disorders were found in 4.67% boys and 7.11% girls. Statistical analysis showed that x2 (chi-squared) test was significant ($P < 0.05$). Table-2 shows that the age range of the respondents was 6 to 16 years, Age range of the children was 6 to 12 years and that of the adolescents was 13 to 16 years.

Table-1: Frequency of somatoform disorders among boys and girls (n=450)

Venue	Total respondents (n=450)			Somatoform disorders (cases) (n=53)			x2
	Boys	Girls	Total	Boys	Girls	Total	
Ped OPD	192 (54.9%)	158 (45.1%)	350	14 (4%)	21 (6.0%)	35	
CP Clinic	53(53%)	47(47%)	100	7 (7%)	11 (11%)	18	
Total	245(54.44%)	205 (45.56%)	450	21 (4.67%)	32 (7.11%)	53 (11.78%)	P< 0.05

Table-2: Socio-demographic characteristics of boys and girls with somatoform disorders

Variables		Boys (n=21)	Girls (n=32)	Total (n=53)
Age	Child (6-12yrs)	9	14	23
	Adolescent (13-16yrs)	12	18	30
Habitat	Urban	13	20	33
	Rural	7	9	16
	Semi-Urban	1	3	4
Religion	Muslim	21	30	51
	Hindu	0	2	2
Academic level	Primary	9	13	22
	Secondary	12	19	33

Table-3 shows that total 246 symptoms were found, in which 96 (39.02%) were in boys and 150 (60.98%) were in girls. Overall somatic symptoms were 1.6 times higher in the girls than that of boys. The difference was very significant at 1% level ($P< 0.01$). Table-4 Shows that undifferentiated somatoform disorder (35.85%) was the commonest diagnosis in both boys and girls, (33.33% and 37.50% respectively).

Table-3: Type and frequency of somatic symptoms

SL.No	Symptom	Boy (N=21)	Girl (N=32)	Total (N=53)	(%)
1.	Headache	13	20	33	13.41
2.	Hot flushes in head	4	10	14	5.69
3.	Heaviness of head	3	4	7	2.85
4.	Pain in chest	3	7	10	4.07
5.	Palpitation	11	9	20	8.13
6.	Breathlessness	1	7	8	3.25
7.	Pain in abdomen	6	6	12	4.88
8.	Burning sensation in body and limbs	2	6	8	3.25
9.	Tingling and numbness in whole body	7	13	20	8.13
10	Pain in different sites of body	3	7	10	4.07
11.	Vertigo or dizziness	5	7	12	4.88
12.	Coldness of limbs	4	7	11	4.47
13.	Frequent micturition	7	7	14	5.69
14.	Dryness of mouth	10	11	21	8.54
15.	Frequent loose motion or constipation	3	3	6	2.44
16.	Flatulence or wind in abdomen	3	3	6	2.44
17.	Anorexia or reluctant to food	6	4	10	4.07
18.	Nausea or vomiting	3	5	8	3.25
19.	Menstruation difficulties (for female only)	-	4	4	1.63
20.	Burning sensation during micturition	0	2	2	0.81
21.	Blurring of vision	1	2	3	1.22
22.	Excessive sweating	0	2	2	0.81
23.	Trembling of body & limbs	1	1	2	0.81
24.	Hot intolerance	0	1	1	0.41
25.	Flushing of face	0	1	1	0.41
26	Burning sensation in eyes	0	1	1	0.41

Table-4: Frequency of different somatoform disorders

Somatoform disorders	Boy (N=21)		Girl (N=32)		Total(N=53)	
	No	%	No	%	No	%
Somatization disorder	5	23.81	8	25.00	13	24.53
Undifferentiated somatoform disorder	7	33.33	12	37.50	19	35.85
Hypochondriacal disorder	1	4.76	1	3.13	2	3.77
Somatoform autonomic dysfunction	3	14.29	4	12.50	7	13.21
Persistent somatoform pain disorder	3	14.29	5	15.63	8	15.09
Other somatoform disorders	2	9.52	2	6.25	4	7.55

Figure 1 shows associated abnormal psychosocial situations were found more in girls (49) than that of boys (23). x2 (chi-squared) test was very significant (P< 0.01). It was also revealed that higher rate of abnormal psychosocial factors was found to have causal relationship of higher rate of somatoform disorders among girls than that of boys (Odds ratio= 5.68). Table-5 shows that the abnormal situations were more in girls than that of boys. Among those, abnormal qualities of upbringing were more as a single category (22) and more in girls (17). In this study, according to ICD-10, associated abnormal psychosocial situations were constellated into five main categories.

Figure-1: Bar Diagram showing associated abnormal psychosocial situations

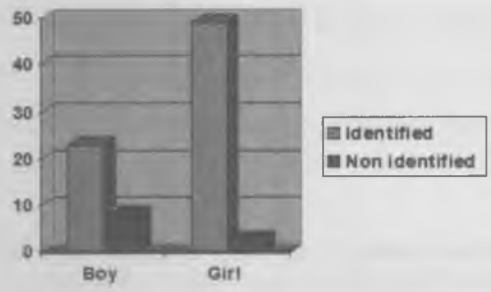

Table-5: Categories of identified associated abnormal psychosocial situations

Category	Boy (N=21)	Girl (N=32	Total (N=53)	x2 Sig.
Abnormal intra-familial relationship	4	15	19	P<0.05
Mental disorder, deviance or handicap in the child's primary support group	0	2	2	NS
Abnormal qualities of upbringing	5	17	22	P<0.05
Abnormal immediate environment or stressful life events	2	8	10	NS
Chronic interpersonal stress associated with school/work	11	8	19	P<0.05

In Table-6, parental overprotection as a single associated abnormal psychosocial situation was found the most frequently (26.42%), followed by inappropriate

academic pressure (16.98%) and inappropriate parental pressure (15.09%). In 11 (20.75%) cases no associated abnormal situation was identified.

Table-6: Associated abnormal psychosocial situations

Situations (factors)	Boy (N=21)	Girl (N=32)	Total(N=53) No	%
Parental overprotection	3	11	14	26.42
Inappropriate parental pressure	2	6	8	15.09
Inappropriate academic pressure	5	4	9	16.98
Parental discord	2	3	5	9.43
Parental separation	0	1	1	1.89
Failure in examination	3	2	5	9.43
Intra-familial discord	0	3	3	5.66
Break of relationship	1	2	3	5.66
Loss of parental affection or neglect	1	2	3	5.66
Second marriage of father	0	2	2	3.77
Upbringing by mother	1	1	2	3.77
Changes of schoo	1	3	2	5 9.43
Parental mental disorder	0	2	2	3.77
Emotional abuse	1	4	5	9.43
Physical abuse	1	2	3	5.66
Sexual abuse	0	2	2	3.77
Not identified	8	3	11	20.75

* More than one situation was recorded.

Discussion

A large proportion of children and adolescents who consult physicians especially pediatricians are suffering from somatoform disorders. It has also been observed that onset and continuation of the somatic symptoms bear a close relationship with unpleasant life events or with difficulties or conflicts.[7]

In this study, It was found that somatoform disorders were significantly higher among girls than that of boys. Twenty six somatic symptoms had been recorded. Most commonly reported somatic symptoms across sex and age including headache, dryness of mouth, palpitation etc. Headache was the most common symptom in both the boys and girls. Significant sex difference in frequency of somatic symptoms was reported. Ninety six (39.02%) somatic symptoms in boys and 150 (60.98%) somatic symptoms in girls were explored. Statistically, overall somatic symptoms were significantly more among girls than that of boys.

In this study, Total identified associated abnormal psychosocial situations were highly significant among girls than that of boys. According to different categories of abnormal psychosocial factors abnormal qualities of upbringing, abnormal intra-familial relationship and chronic

interpersonal stress associated with school/work were significantly higher among girls. Further, individual associated abnormal psychosocial factor was also higher among girls than that of boys. 72 (135.85%) (more than one factor was recorded in a patient) associated abnormal psychosocial factors were identified with the predisposition, onset and course of the disorders. In 11 (20.75%) cases, no factor was identified. Parental overprotection was found single largest factor of the abnormal qualities of upbringing to contribute in somatization. Inappropriate academic pressure was found second most frequent situation. Particularly, inappropriate parental pressure, parental discord, changes of school, emotional abuse and failure in examination were found in significant cases. Regarding factors in children & adolescents, they were best seen as personality traits rather than as disorders. Among factors in family, modeling for attention seeking behavior, parental disharmony, overprotection, and disorganized family were found frequently. Both chronic adversities and acute life events could play a part as external stressors. Abuse only seems relevant in a small minority of cases; bullying and academic stresses were probably more common contributors9. In a study in Bangladesh, some factors associated with somatoform disorders were identified. Those were parental overprotection, inappropriate academic pressure, inappropriate parental pressure, failure in examination, changes in school, intra -familial discord among adults. Parental overprotection was most common[7]. Current study reflects the similar factors associated with somatoform disorders. This is a hospital-based study. It dose not represent the picture of the whole nation. Community-based study is recommended.

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