

Socio-demographic profile of children and adolescents with Conduct Disorder and Oppositional Defiant Disorder in tertiary care hospitals

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Summary

Conduct Disorder (CD) and Oppositional Defiant Disorder (ODD) are predominant juvenile disorders seen in the community and are of great concern because of their high degree of impairment. This descriptive cross-sectional study was conducted in the Department of Psychiatry, Bangabandhu Sheikh Mujib Medical University and National Institute of Mental Health, Dhaka during the period from August 2011 to November 2012 with sample size of 81. During data collection, semi-structured questionnaire designed by the researcher containing socio-demographic variables and Developments and Well-Being Assessment (DAWBA) - self, parent and teacher version were used.

The results indicated that there was a clear male preponderance in both ODD and Conduct disorder but the gender difference was narrowed among respondents with ODD. Male-female ratio was 2.5:1 in this study. Age trends showed frequency of CD increased with age with the highest peak in mid childhood (10-14yrs) but age distribution of ODD was minimum in older age group and maximum in mid childhood. Socio-demographic correlates revealed that 70% of the respondents were from urban background and nuclear family and monthly family income was more than 10,000 BDT in 80 % of individuals. In total 16% of the respondents stopped going to school and children with Conduct disorder had bad academic performance (36.7%). A substantial portion of Conduct disorder reported smoking (40.8%) and drug abuse (20.4%). This was the first study in Bangladesh exploring the socio-demographic profiles of Conduct Disorder and Oppositional Defiant Disorder in hospital setting. Lack of data from poor and disadvantaged children and adolescents limited the findings of socio-demographic correlates. Considering limitation, careful conclusion should be drawn from the findings of the present study. Broad based study with large sample is necessary for better understanding of the problem in this area.

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Introduction

The essential feature of Conduct Disorder is a repetitive and persistent pattern of behavior in which basic rights of others or major age appropriate societal rules or norms are violated. Oppositional defiant disorder (ODD) involves a pattern of negativistic, hostile, and defiant behavior and often considered as a precursor/ prodrome of Conduct disorder¹. Both disorders are classified under the broad heading of Attention-Deficit and Disruptive Behavior Disorders in DSM-IV. ODD is considered to be a sub-syndrome of Conduct disorder in ICD-10 but DSM-IV puts ODD as a separate diagnosis. Worldwide, Disruptive Behaviour Disorders are amongst the most frequent reasons that a given youth is referred for mental health evaluation. Conduct disorder (CD) is a devastating condition, not only because youth with the disorder repeatedly inflict physical harm and property loss on others, but also because the youth themselves are at risk for other forms of psychopathology (e.g., depression, suicide, substance abuse, and antisocial personality)². In Oppositional defiant disorder (ODD), a child's temper outbursts, active refusal to comply with rules and annoying behavior exceeds expectation for the children of same age. Conduct problems are common mental health concern in childhood, affecting 5-8%

of the population³. Long-term outcomes are very poor, with three- to sixfold increases in the prevalence of adult criminal violence, drug misuse, school failure, teenage pregnancy and unemployment⁴. Although proven preventative interventions exist, they reach few children, even in high-income countries. This problem is amplified in low- and middle-income countries where child mental health services are extremely limited.^{5,6} In Bangladesh, the prevalence of Conduct Disorder and Oppositional Defiant Disorder was 2.9% and 5.9% respectively in 5-10 years old children according to Mullick et al⁷ and prevalence in slum areas was much higher than those residing in rural and urban areas. In contrast, Rabbani et al⁸ found 1.0% prevalence of each disorder in a community survey. Another study done among socially disadvantaged children of Dhaka city⁹ revealed that 7% of boys had Conduct disorder. Another hospital based study on children and adolescents conducted in the National Institute of Mental Health¹⁰ found that Conduct Disorder/Oppositional Defiant Disorder was present in 12.06% of attendees at the out-patient department. In a least developed country like Bangladesh with serious problems of poverty, illiteracy, overpopulation etc. children are particularly at risk of developing behavioral disorders like Conduct Disorder and Oppositional

Defiant Disorder. Yet, there is a substantial lack of scientific papers about the baseline information about these two disorders. Clinical experience and sharing with senior and junior colleagues have influenced the researcher to conduct a research in this field.

Materials and Methods

This was a descriptive cross sectional study conducted in the Department of Psychiatry, Bangabandhu Sheikh Mujib Medical University (BSMMU) and National Institute of Mental Health (NIMH), Dhaka. The study was conducted during the period from August 2011 to November 2012. Children and adolescents diagnosed as Conduct disorder or Oppositional defiant disorder at the study places were taken as samples, after taking informed written consent from their parents. Both indoor and outdoor patients from BSMMU were taken as samples. From NIMH, children attending the weekly child guidance OPD clinic were approached. The researcher approached a total 81 children and adolescents. Among them, 55 were from BSMMU and 26 were from NIMH OPD. Total 81 children and adolescent participated in the study; therefore the participation rate was 100%. During data collection, semi-structured questionnaire designed by the researcher containing socio-demographic variables was used and Developments and

Well-Being Assessment (DAWBA) - self, parent and teacher versions were used to generate DSM-IV diagnosis among children and adolescents of 5 to 17 years.

DAWBA is an internationally well accepted research instrument and a novel package of questionnaires, interviews and rating techniques designed to generate DSM-IV and ICD-10 psychiatric diagnoses among children and adolescents of 5 to 16 years (extended up to 18 years). This instrument has been translated in Bangla and standardized and validated by Mullick MSI et al⁷. The validated Bangla version of DAWBA was used in this study. Data was analyzed using Statistical Package for Social Science (SPSS), version 17.0 for Windows.

In the first visit, DAWBA Parents version and self version (in respondents over 11 years) was applied. Teacher's version was supplied to the parents and was collected via parents during the second visit. Response from either school teacher or house teacher's was accepted. Some of the respondents did not come back for further follow up and some of them stopped going to school, that's why teacher's version could not be applied. Some parents refused to convey the sheet to the teacher. The number of missing teacher data was 50. As a whole, 38% of the DAWBA teacher's version was collected.

Results

Results are presented below in graphical and tabular forms.

Fig 1: Multiple bar diagram showing age distribution of the respondents

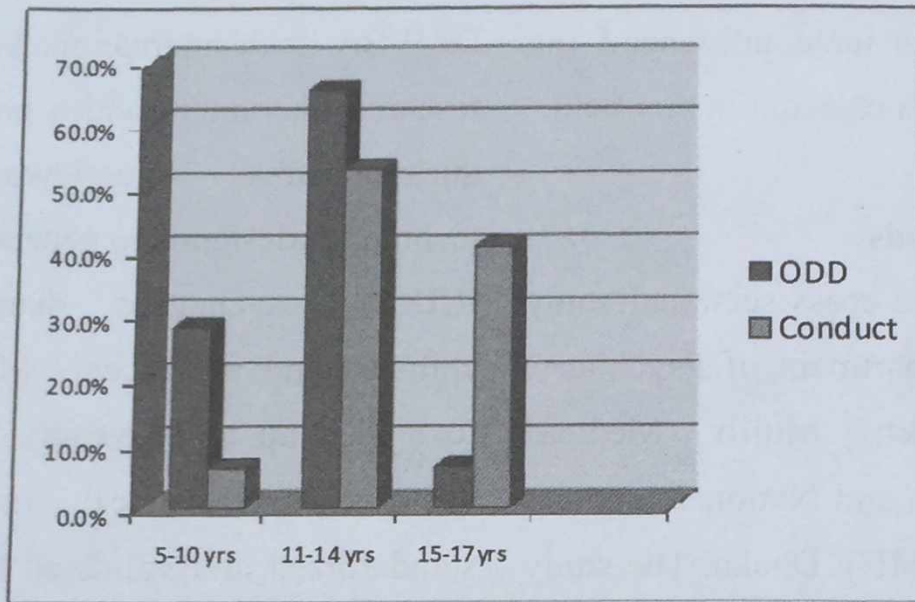


Fig 2: Pie chart showing the distribution of the respondent's residence

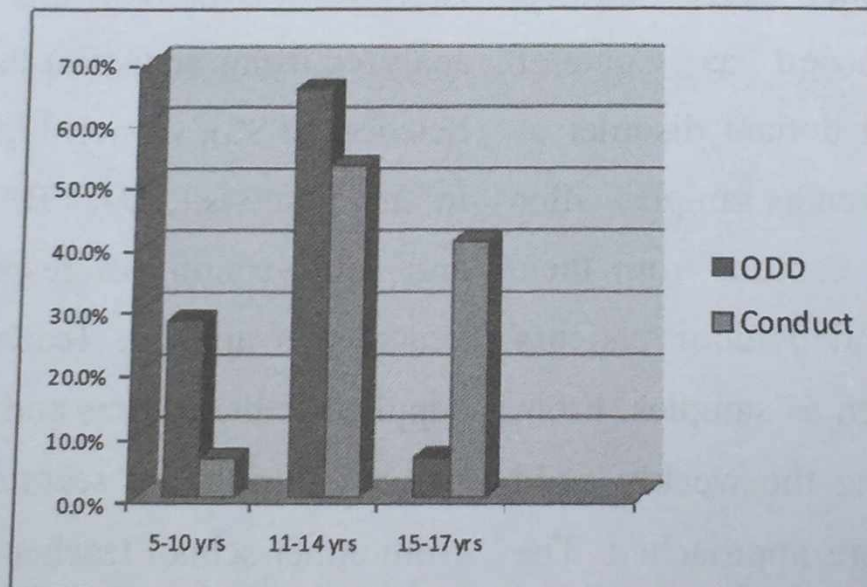


Table 1: Frequency and percentage of socio -demographic variables (gender, religion, birth history and developmental history) (n=81)

		ODD		CD		Total		P
		n	%	n	%	n	%	
Gender	Boy	19	59.4	39	79.6	58	71.6	<0.049*
	Girl	13	40.6	10	20.4	23	28.4	
	Total	32						
Religion	Islam	27	84.4	45	91.8	72	88.9	<0.296
	Hindu	5	15.6	4	8.2	9	11.1	
	Total	32	100	49	100	81	100	

Birth history	Uneventful	23	71.9	47	95.9	70	86.4	<0.005**
	Birth complication	8	25.0	1	2.0	9	11.1	
	Unknown	1	3.1	1	2.0	2	2.5	
	Total	32	100	49	100	81	100	
Developmental history	Normal	24	75.0	45	91.8	69	85.2	<0.099
	Delayed	7	21.9	3	6.1	10	12.3	
	Unknown	1	3.1	1	2.0	2	2.5	
	Total	32	100	49	100	81	100	

Table 2: School factors of the respondents (going to school or not, educational status, level of academic performance. (n=81)

		ODD		CD		Total		P
		n	%	n	%	n	%	
Going to school? (for last 6 months)	Yes	28	87.5	40	81.6	68	84.0	<0.482
	No	4	12.5	9	18.4	13	16.0	
	Total	32	100	49	100	81	100	
Level of education	Illiterate	1	3.1	1	2.0	2	2.5	<0.002
	Class I-V	24	75.0	16	32.7	40	49.4	
	Class VI-X	7	21.9	30	61.2	37	45.7	
	Class XI-XII	0	0	2	4.1	2	2.5	
	Total	32	100	49	100	81	100	

Fig 3: Pyramid diagram showing the level of academic performance of the respondents

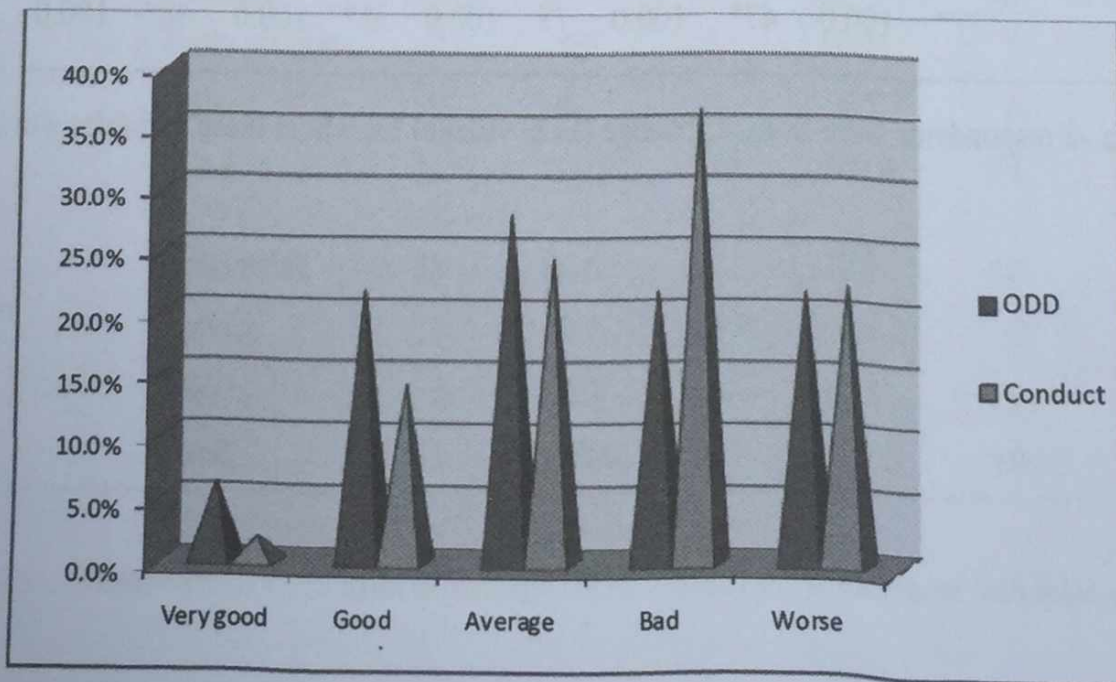


Fig 4: Component bar diagram showing substance abuse among the respondents (parental report)

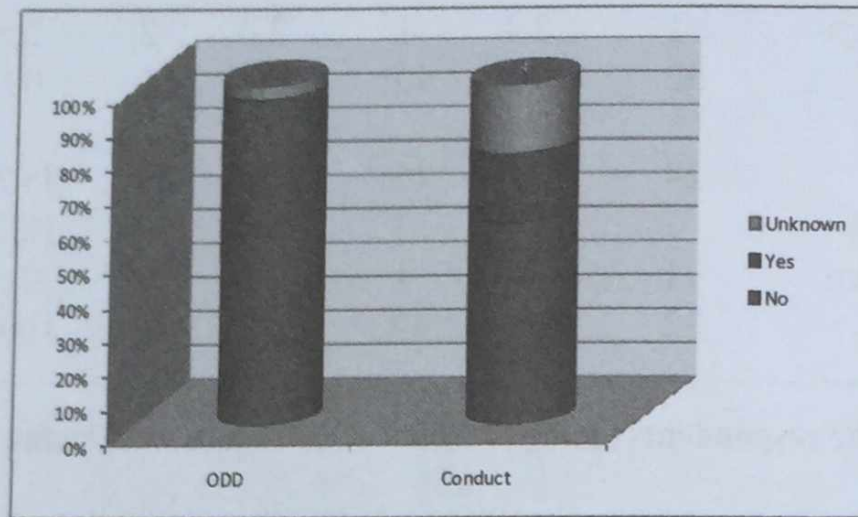


Table 3: Educational status of parents of the respondents

Educational status	Father						Mother					
	ODD		CD		Total		ODD		CD		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Illiterate	1	3.2	2	4.3	3	3.8	1	3.2	2	4.2	3	3.8
Can sign only	1	3.2	1	2.1	2	2.6	1	3.2	1	2.1	2	2.5
Primary	2	6.4	3	6.4	5	6.4	2	6.5	9	18.8	11	13.9
Secondary	5	16.1	8	17.0	13	16.7	12	38.7	13	27.1	25	31.6
Higher secondary	4	12.9	10	21.3	14	17.9	5	16.1	15	31.3	20	25.3
Graduate and above	18	58.1	23	48.9	41	52.6	10	32.3	8	16.7	18	22.8
Total	31*	100.0	47*	100.0	78	100.0	31*	100.0	48*	100.0	79	100.0

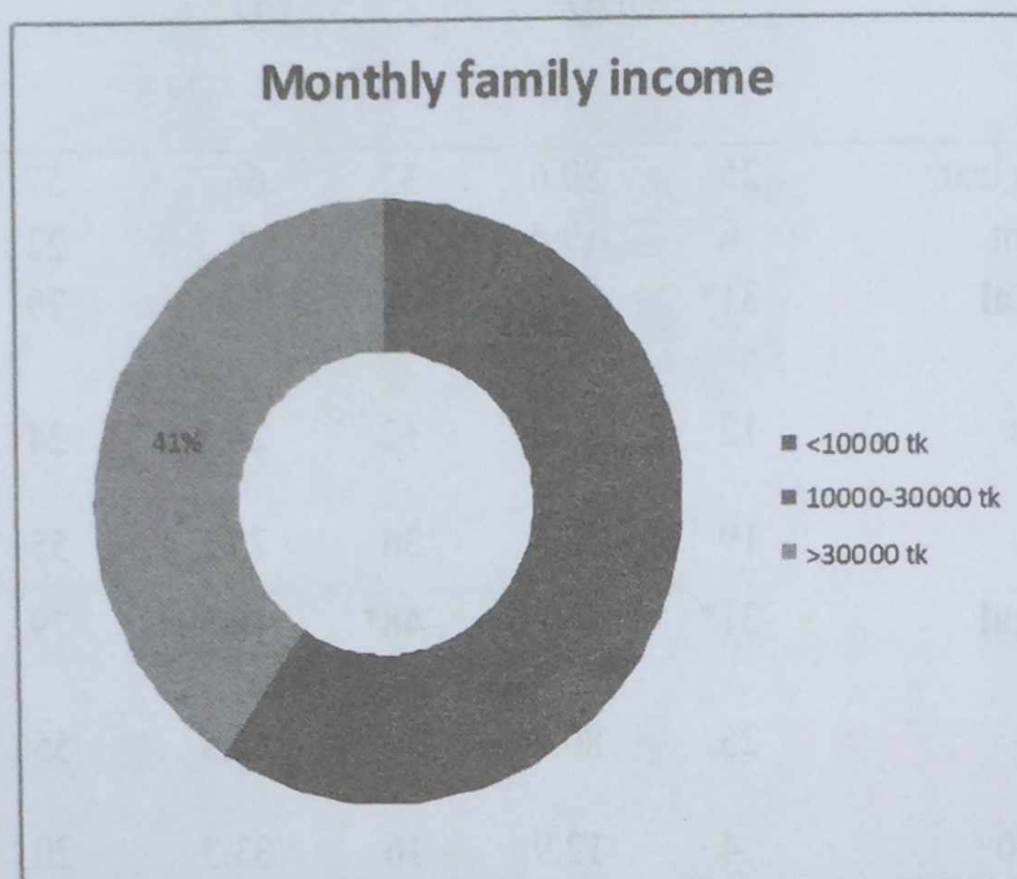
*Missing data -2 respondents were from orphanage (SOS village) for whom these variables were not applicable

Table 4: Type of family, number of family members and parent's occupation among the respondents (n=79)

Variables		ODD		CD		Total	
		n	%	N	%	n	%
Type of family	Nuclear	25	80.6	32	66.7	57	72.2
	Joint	6	19.4	16	33.3	22	27.8
	Total	31*	100.0	48*	100.0	79	100.0
Only child	Yes	12	37.5	12	24.5	24	30.4
	No	19	62.5	36	75.5	55	69.6
	Total	31*	100.0	48*	100.0	79	100.0
Number of family members	3-6	25	80.7	30	62.5	55	69.6
	7-10	4	12.9	16	33.3	20	25.3
	11 or above	2	6.4	2	4.2	4	5.1
	Total	31*	100.0	48*	100.0	79	100.0
Father's occupation	Unemployed	1	3.2	5	10.6	6	7.7
	Agriculture	2	6.5	1	2.1	3	3.8
	Service	15	48.4	21	44.7	36	46.2
	Business	11	35.5	11	23.4	22	28.2
	Daily worker	2	6.5	5	10.6	7	9.0
	Others	0	0	4	8.5	4	5.1
	Total	31*	100.0	47*	100.0	78	100.0
Mother's occupation	Housewife	25	80.6	37	77.1	62	78.5
	Service	3	9.7	5	10.4	8	10.1
	Others	3	9.7	6	12.5	9	11.4
	Total	31	100.0	48	100.0	100.0	100.0

*Missing data - 2 respondents were from orphanage (SOS village) for whom these variables were not applicable

Fig 5: Pie chart showing the monthly family income of the respondents



Discussion

Age and gender trends

In this study, the male female ratio was 2.5:1. There was a clear male preponderance in both ODD and Conduct disorder but the difference was narrowed among respondents with ODD. Among children and adolescents with ODD, 40.6% were female, whereas the percentage was much lower (20.4%) in Conduct disorder. The difference in gender distribution was statistically significant ($p < 0.05$). Across the globe, a wide range of studies have reported increased prevalence of Conduct disorder in boys^{11,12,13}. In a study done among the school children in India¹⁴, Conduct disorder was found in 4.58%; the ratio of boys to girls being 4.5:1. In childhood onset type, the ratio of boys to girls was found to be 7:1 while in adolescent onset type, it was reduced to 2:1. Boys also showed higher rates of ODD but the difference were much more modest^{15,16}. Keenan and Shaw¹⁷ hypothesized that there are no gender differences in behavior problems during early childhood, but gender differences in rates of conduct problems emerge as the result of gender differences in socialization. In

a household survey of 1,285 youths aged 9 to 17 years Lahey¹⁸ also found there were no gender differences in oppositional behaviours. These studies support the finding of the present study. In the present study, age distribution showed that frequency of Conduct Disorder increased with age with the highest peak (53.1%) in mid childhood (10-14yrs). On the other hand, age distribution of ODD was minimum in older age group, maximum (65.6%) in mid childhood and 28.1% in age group of 5-10 years. The difference in age distribution was highly significant ($p < 0.001$). This finding is congruent with the result of Simonoff¹⁹, where increasing prevalence with age was reported in Conduct disorder especially in the mid-teens. On the other hand the finding is not in accordance with some studies¹⁸ who reported that ODD symptom counts showed a significant decline with age. Reasons for the discrepant findings may be that the present study is a hospital based study with small sample size, but the above mentioned studies were community surveys with large sample size where the age trends were reflected more accurately.

Socio-demographic correlates

Present study showed that most of the respondents (70.3%) were from urban background, among them 2 children were from an urban orphanage. Total 23.5% respondents were from rural background. No children with ODD were from slum area but 5 children with conduct disorder (6.2%) were from slum. This finding is not consistent with that of Mullick et al (2005)⁷, a community based study where it was reported that children from the slum areas of Bangladesh were significantly more likely to have serious behavioural problems and rural children had almost same prevalence as urban population. The possible explanation of this discrepancy could be that, the study was hospital based and both the study places are situated in Dhaka city where it was inconvenient or costly for rural/slum people to seek psychiatric service. It is also a common perception of poor people that hospital treatment is expensive though the cost of treatment in both the study places is reasonable and within the reach of general population. Another explanation might be that the under educated people of the slum/rural area are less aware about the behavioural problems of their children, thinking that the child is simply naughty or spoiled. Majority of the respondents were Muslims (88.9%), which is a reflection of the general population. Birth and developmental history was normal in majority of respondents though higher rates of birth complication was found in children with ODD and the difference was statistically significant. An important finding was that 16% of the respondents stopped going to school (for at least last 6 months) and 2 of them never attained school. Maximum children with ODD were in primary level and majority with Conduct disorder were in secondary level. Academic performance of children was reported by the parents considering the last two consecutive school exams. Academic performance in respondents with Conduct disorder were mostly poor (average to bad) which is in accordance with Biederman et al (1996)¹ who concluded that poor academic performance is associated with externalizing problems. Regarding ODD a mixed picture was noted where similar

percentage for good, bad and worse academic performance was found.

Another important finding was that a substantial portion of Conduct disorder reported smoking (40.8%) and drug abuse (20.4%). It is also worth mentioning that many parents of Conduct disorder (20.4%) suspects their child of drug abuse but are not sure enough. The rates of smoking and drug abuse was almost nil in ODD and the difference was highly significant ($p < 0.001$). This variable was only analyzed on the basis of parent's report which requires much clarification before reaching a conclusion.

Familial and parental factors

Father's mean age was 43.39 & 46.72 yrs, and mother's mean age 34.52 and 36.29 yrs respectively for ODD and Conduct disorder. Most of the fathers were educated up to graduate level or above (52.6%). Mothers' education was mostly up to secondary and higher secondary level. Most of the fathers were either in service or in business, most of the mothers were housewives. Unemployment of father was found only in 7% of cases which is not congruent with the finding of Fergusson et al²⁰ who concluded that unemployment of parents are associated with anti-social behaviour. This can be explained by considering the fact that most of the cases in this study were from urban and well off family background. Most of the respondents were from nuclear family (72.2%) and number of family members was between 3-6 persons in 69.6% respondents. Monthly family income was more than 30,000 BDT in 40.5% and 10,000-30,000 BDT in 38% cases. These findings are totally opposite of the world wide studies^{2,11, 21} who reported that living in impoverished or adverse socio-economic conditions during childhood is associated with increased risk of Conduct disorder and ODD. This finding indicates that the poor and disadvantaged people in Bangladesh are not coming to seek help from the psychiatric facilities for the behavioural problems of their children. In Bangladesh, joint family and parents having a number of children is common and physical punishment by parents is not considered as an offense. But with the

rise of literacy rate and urbanization, there is paradigm shift going on where people are preferring small family and the parents of affluent society with single child are generally over-protective. A surprising finding of the present study is, about 37.5% and 24.5% of patients with ODD and Conduct disorder respectively were the only child of their parents. Numerous studies^{21,22,23} showed that poor parenting (harsh, inconsistent, lack of monitoring) is related to disruptive behaviour. But is over protective parenting also a risk factor for developing disruptive behaviours, specially ODD? There are not enough study finding to draw a conclusion but this finding certainly requires attention. Though many studies concluded that parental death/separation,^{21,24} change of parental figure²¹, illicit drug/alcohol abuse in parents²⁵, and criminality of parents²⁶) are associated with the development and bad prognosis of disruptive behaviours, specially Conduct disorder. In the present study, death/separation of parents were present among 16.5% of respondents and 8.9% had step parents, chronic physical illness and alcohol/drug abuse was present in 13.9% and 12.7% of parents respectively. But the difference between ODD and Conduct disorder was not statistically significant.

Despite a number of limitations (like small sample size, lack of data from teachers etc.), this study provided base line data in the field of childhood behavioural problems in Bangladesh. This was the first study to explore the age and gender trends and other socio-demographic correlates of ODD and Conduct disorder in Bangladesh. Broad based multi-centere d community studies will confirm the findings of the present study. Appropriate treatment plan based on the findings will help to combat the need.

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