

Determinants of conduct disorder in children attending a psychiatric hospital

Afroza Rahman Lopa, Mahfuza Yasmin, Sadia Afrin, Taiyeb Ibna Zahangir, Mahbub Hasan

Background: Prevalence of conduct disorder (CD) is high in child population. A number of biological, psychological and social factors were reported to be associated with CD.

Objectives: To find out the determinants of CD in child population.

Methods: A cross-sectional study was conducted in National Institute of Mental Health (NIMH), Dhaka and by convenient sampling technique 84 parents of children with and without CD were enrolled in the study. Sociodemographic, lifestyle and family life related information were collected by a structured questionnaire.

Results: Boys (OR=3.75), school dropout children (OR=2.17) and children who came from nuclear families (OR=20.4) showed higher risk of having CD. We observed, presence of domestic violence (OR=7.65), violence in front of children (OR=1.15), marital conflict between parents (OR=2.64), substance use of parents (OR=4.95), mental illness in parents (OR=5.2) and having criminal history of parents (OR=2.44) had significantly increased risk of CD in children.

Conclusions: A number of sociodemographic and family life related factors conferred greater risk of having CD in children.

Declaration of interest: None

Copyright and usage: ©Archives of NIMH 2023

Keywords: Conduct disorder; determinants; Bangladesh.

Introduction

Conduct disorder (CD) is identified by a consistent and recurring behavior pattern that involves breaking important societal rules or infringing upon the rights of others that are appropriate for someone of that age.¹ In the National Mental Health Survey of Bangladesh prevalence of disruptive, impulse control and conduct disorders reported was 1.7% according to DSM-5 criteria in 7-17-year-old.² Previously, Rabbani and Hossain reported its prevalence as 8.9% in Bangladeshi child population between Grade I and V.³ Mullick and Goodman (2005) assessed psychiatric disorders by Development and Well-Being Assessment (DAWBA) scale in 5-10-year-old children and found the prevalence of conduct disorder as

2.9%.⁴ The disorder has profound social implications and is closely linked to chronic antisocial behavior in adulthood. According to Robins' research, around 30% to 50% of children with CD fulfill the criteria for antisocial personality disorder (APD) when they reach adulthood and virtually all adult cases of APD have a history of severe CD during their childhood.⁵

There are several key risk factors that have been shown to be highly predictive of conduct disorder (CD) and delinquent behavior. These include impulsive tendencies, low intelligence quotient (IQ), poor academic performance, inadequate parental supervision, inconsistent

or harsh parental discipline, unemotional or neglectful parental behavior, physical abuse of the child, parental conflicts, family disruption, presence of antisocial parents, large family size, low household income, association with delinquent peers, attending schools with high rates of delinquency and residing in high-crime neighborhoods.⁶ However, it is not yet clear whether these factors have a direct causal effect on CD and delinquency. Children are the future of the world and need to be raised and educated in conditions most favorable to their personal growth and development. Onset, course and prognosis of CD show addressing biological, psychological and social risk factors can prevent it. Keeping this in mind, this study was carried out to find out the determinants of CD in child population attending the National Institute of Mental Health (NIMH), Dhaka.

Methods

A cross-sectional comparative study was carried out at NIMH, Dhaka. Beforehand, ethical clearance was taken from the authorities. Parents of children with or without conduct disorder where children were aged below 18 were conveniently approached for this study. 84 parents were interviewed face-to-face and among them 42 were parents of children with CD. For comparison age matched parents were approached from the outdoor who brought their children with other mental disorder or without any. CD was diagnosed by psychiatrists working in the outdoor of NIMH according to DSM-5 criteria. Following enrollment sociodemographic and some other relevant data were collected from each parent. Statistical analysis of the results was done by using computer-based statistical software, SPSS-IBM version 22.

Results

The mean age of the children with CD was 13.1 ± 3.3 and children without CD 10.3 ± 3.3 . As for CD groups, boys were predominant (83.3%), most came from nuclear families (97.6%) and around one-third of the respondents had no formal education. As for non-CD groups, girls had higher number compared to CD group, one-third came from extended families and a higher percentage of respondents had honors or higher than that education (50%).

Table 1: Characteristics of respondents participated in this study (N=84)

Characteristic	CD group	Non-CD group
Gender of the child		
Male	35 (83.3)	24 (57.1)
Female	7 (16.7)	18 (42.9)
Occupation of the child		
Student	36 (85.7)	39 (92.9)
School dropout	6 (14.3)	3 (7.1)
Residence		
Urban	32 (78.6)	34 (81)
Semi-urban	2 (4.8)	2 (4.8)
Rural	8 (19)	6 (4.3)
Family type		
Nuclear	41 (97.6)	28 (66.7)
Extended	1 (2.4)	14 (33.3)
Educational status of the respondent		
No formal education	14 (33.3)	-
Primary	6 (14.3)	-
Secondary	7 (16.7)	4 (9.5)
Higher Secondary	4 (9.5)	2 (4.8)
Graduate or higher	11 (26.2)	21 (50)
Others	-	15 (35.7)
Profession of the respondent		
Businessman	1 (2.4)	-
Farmer	4 (9.5)	2 (4.8)
Service holder	12 (28.6)	32 (76.2)
Housewife	23 (54.8)	8 (19)
Others	2 (4.8)	-

Table 2 shows the associations of sociodemographic factors with conduct disorder in children. Male children and school dropouts were more likely to present with CD. Also, children from nuclear families showed higher risk of having CD. No formal and primary educational status of parents confer greater risk of CD, whereas honors and above education non-CD. No significant association was found between residents and occupation of the parents with CD.

Table 2: Association of sociodemographic factors with CD (N=84)

Variable	Level	CD group	Non-CD group	OR	P value
Gender of the child	Male	35 (59.3)	24 (40.7)	3.75	0.016
	Female	7 (28)	18 (72)		
Occupation	Student	36 (48)	39 (52)	0.46	0.010
	Dropout	6 (66.6)	3 (33.3)		
Residence	Urban	32 (48.5)	34 (51.5)	-	0.101
	Semi-urban	2 (50)	2 (50)		
	Rural	8 (57.1)	6 (42.8)		
Family type	Nuclear	41 (59.4)	28 (40.6)	20.4	0.000
	Extended	1 (6.7)	14 (93.3)		
Respondent's education	No formal	14 (100)	-		0.000
	Primary	6 (100)			
	Secondary	7 (63.6)	4 (36.4)		
	Higher secondary	4 (66.7)	2 (33.3)		
	Honors and above	11 (34.4)	21 (65.6)		
	Others	-	15 (100)		

P values obtained from chi-square tests, OR-Odds ratio, cell values are n (%)

Table 3 shows the association of various characteristics of parents and family life with CD. We observed, presence of domestic violence (OR=7.65), violence in front of children (OR=1.15), marital conflict between parents (OR=2.64),

substance use of parents (OR=4.95), mental illness in parents (OR=5.2) and having criminal history of parents (OR=2.44) had significantly increased risk of CD in children.

Table 3: Association of various characteristics of parents and family life with CD (N=84)

Variable	Level	CD group	Non-CD group	OR	P value
Single parent	Yes	4 (33.3)	8 (66.7)	0.43	0.111
	No	38 (52.7)	34 (47.3)		
Violence in front of children	Yes	23 (79.3)	6 (20.7)	1.15	0.000
	No	19 (34.5)	36 (65.4)		
Mental illness in parents	Yes	12 (80)	3 (20)	5.2	0.010
	No	30 (43.5)	39 (56.6)		
Substance use in parents	Yes	19 (76)	6 (24)	4.95	0.002
	No	23 (39)	36 (61)		
Marital conflict	Yes	19 (65.5)	10 (34.5)	2.64	0.029
	No	23 (41.8)	32 (58.1)		
Domestic violence	Yes	27 (77.1)	8 (22.9)	7.65	0.000
	No	15 (30.6)	34 (69.4)		
Criminal history	Yes	13 (100)	-	2.44	0.000
	No	29 (40.8)	42 (59.2)		

P values obtained from chi-square tests, OR-Odds ratio, cell values are n (%)

Discussion

We observed boys were at higher risk of having CD. Previous studies also reported that boys are more frequently diagnosed with CD than girls and the prevalence ratio can vary from approximately 4:1 to as high as 12:1.⁷ Boys are more likely to show physical aggression and risky sexual behavior than girls both of which are symptoms of CD; such, having more chances of being diagnosed with CD.⁸ They are also more likely than girls to receive harsh physical discipline, particularly by their fathers. Like our study, a Brazilian study, found that CD is higher among school dropouts even after adjustment for age, estimated IQ, school repetition, family structure and income.⁹ Behavioral issues in children can hinder their learning opportunities due to the fact that these children are often subjected to disciplinary actions for their behavior.¹⁰ This can result in strained relationships with teachers and the development of negative attitudes towards school, ultimately leading to diminished academic achievements and even dropout. In this study, CD children also showed higher chances of having parents with lower educational levels. The educational levels of parents, particularly when they are low, can have an impact on negative patterns of interaction within the family. These patterns, in turn, can influence the development of behavior problems in children, specifically aggression.¹⁰ Also, higher educational levels have been linked with positive parenting.

National Mental Health survey of Bangladesh, 2018-2019 also found that prevalence of disruptive, impulse control and conduct disorders were more in urban children than rural children (2.7% vs. 1.7%).² We didn't find any association between CD and place of living. Regarding family issues, we observed domestic violence, violence in front of children and marital conflict raised the chances of having children with CD. Children exposed to these issues are found to have negative impact in behavioral, cognitive and emotional functions. For instance, Sajadi et al.¹¹ theorized that couples who are emotionally disconnected tend to neglect the necessary discussions and management of conflicts related to their child. In such families, physical punishment is frequently employed, which not only poses significant health risks to the child but also perpetuates a harmful cycle of domestic violence and conflict. Marital conflicts characterized by physical aggression, nonverbal or verbal hostility or threats to the family's unity are often referred to as destructive due to their association with the child's reactive distress and aggressive behavior.

We found that parental substance use, crime history and history of having mental illness conferred greater risk of

having CD in children. The presence of substance use problem within a household can place a significant burden on economic resources, leading to financial strain as well as breakdown of relationships among family members.¹² These factors collectively serve as social determinants that influence the health of children. When parents engage in criminal behaviors, it can have detrimental effects on the family environment and parenting practices, leading to a higher probability of conduct problems in their children.¹³ The exposure to criminal behaviors and the associated social and environmental factors, such as instability, violence, and substance abuse, can negatively impact the child's development and increase the risk of engaging in delinquent and antisocial behaviors.¹³ Finally, when parents themselves have mental illness children may face various inappropriate environmental stimuli that can adversely affect their development. These include instances of parental rejection, insufficient parental affection and support, excessive indulgence, lack of clear family goals, emotional distance within the family, absence of maternal love and nurturing, insecure childhood attachments, and parental stress.¹⁴ These factors can have negative consequences on the child's well-being and may contribute to the development of behavioral issues.

Conclusions

Several sociodemographic and family life related factors conferred greater risk of having CD in children.

This study had some limitations. Limitations include cross-sectional study design, which limits the strength of causal relationship. Also, samples were enrolled from a single center, so generalizability might be an issue.

Afroza Rahman Lopa, Registrar, Psychiatry, National Institute of Mental Health (NIMH), Dhaka, Bangladesh; **Mahfuza Yasmin**, Registrar, Psychiatry, NIMH, Dhaka, Bangladesh; **Sadia Afrin**, Assistant Professor, Child, Adolescent & Family Psychiatry, NIMH, Dhaka, Bangladesh; **Taiyeb Ibna Zahangir**, Assistant Professor, Psychiatry, NIMH, Dhaka, Bangladesh; **Mahbub Hasan**, Indoor Medical Officer, Psychiatry, NIMH, Dhaka, Bangladesh.

Correspondence: Afroza Rahman Lopa, Registrar, Psychiatry, National Institute of Mental Health, Dhaka, Bangladesh.

Email: lopaafroza1986@gmail.com

How to cite this article: Lopa AR, Yasmin M, Afrin A, Zahangir TI, Hasan M. Determinants of conduct disorder in children attending a psychiatric hospital. *Arch NIMH*. 2023; 6(1): 13-17.

Received 20 May 2023, revised 31 May 2023, accepted 07 June 2023.

References

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Washington, DC: American Psychiatric Publishing; 2013.
2. Alam, M. F., Ahmed, H. U., Alam, M. T. & Sarkar, M. (2021). National Mental Health Survey 2019. National Institute of Mental Health, NIMH Press, Dhaka.
3. Rabbani MG, Hossain MM. Behaviour disorders in urban primary school children in Dhaka, Bangladesh. *Public Health*. 1999; 113(5): 233-6.
4. Mullick MSI, Goodman R. The prevalence of psychiatric disorders among 5–10-year-olds in rural, urban and slum areas in Bangladesh. *Soc Psychiat Epidemiol*. 2005; 40(9): 663-71.
5. Robins LN, Tipp J, Przybeck T. Antisocial personality. In: Robins LN, Regier DA, editors. *Psychiatric Disorders in America*. New York, NY: Free Press; 1991. pp. 224-71.
6. Murray J, Farrington DP. Risk factors for conduct disorder and delinquency: key findings from longitudinal studies. *Can J Psychiatry*. 2010; 55(10): 633-42.
7. Mohan L, Yilanli M, Ray S. Conduct Disorder. [Updated 2023 Mar 13]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK470238>.
8. Brooks Holliday S, Ewing BA, Storholm ED, Parast L, D'Amico EJ. Gender differences in the association between conduct disorder and risky sexual behavior. *J Adolesc*. 2017; 56: 75-83.
9. Tramontina S, Martins S, Michalowski MB, Ketzer CR, Eizirik M, Biederman J, et al. School dropout and conduct disorder in Brazilian elementary school students. *Can J Psychiatry*. 2001; 46(10): 941-47.
10. Dubow EF, Boxer P, Huesmann LR. Long-term effects of parents' education on children's educational and occupational success: mediation by family interactions, child aggression, and teenage aspirations. *Merrill Palmer Q (Wayne State Univ Press)*. 2009; 55(3): 224-9.
11. Sajadi S, Raheb G, Maarefvand M, Alhosseini KA. Family problems associated with conduct disorder perceived by patients, families and professionals. *J Educ Health Promot*. 2020; 9: 184.
12. Lander L, Howsare J, Byrne M. The impact of substance use disorders on families and children: from theory to practice. *Soc Work Public Health*. 2013; 28(3-4): 194-205.
13. Murray J, Farrington DP, Sekol I. Children's antisocial behavior, mental health, drug use, and educational performance after parental incarceration: a systematic review and meta-analysis. *Psychol Bull*. 2012; 138(2): 175-210.
14. Dubois-Comtois K, Bernier A, Tarabulsy GM, Cyr C, St-Laurent D, Lanctôt AS, et al. Behavior problems of children in foster care: Associations with foster mothers' representations, commitment, and the quality of mother-child interaction. *Child Abuse Negl*. 2015; 48: 119-30.