

Parenting Practices and Aggression in Childhood Behaviour Disorders

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ABSTRACT

Objective: To determine the association between parenting practices and aggression in children with behaviour disorders.

Study Design: Cross-sectional study.

Place and Duration of Study: Children Hospital and Institute of Child Health, Lahore Pakistan, from Nov 2020 to Jan 2021.

Methodology: Parents of children and eighty-five children between the ages of 3 to 12 years with the diagnosis of behaviour disorders (autism spectrum disorder, attention deficit hyperactive disorder, social communication disorder) and showing aggressive behaviour were enrolled. The multidimensional assessment of parenting scale was used to assess positive (proactive parenting, positive reinforcement, warmth and supportiveness) and negative (hostility, lax control, physical control) parenting practices. The modified overt aggression scale was used to assess aggression, including verbal aggression, aggression against property, auto-aggression (towards self), and physical aggression (towards others). Correlation and multiple regression analysis were done.

Results: Among negative practices, it was found that leniency and inconsistent parenting (lax control) was significant positive predictor of aggression ($p<0.01$) in children with behaviour disorders. Supportiveness was a significant negative predictor of verbal aggression ($p<0.01$), while physical control positively predicted total aggression ($p<0.05$). Among positive parenting practices, positive reinforcement decreased auto aggression ($p<0.05$) in children with behaviour disorders. Lower maternal education correlated with more aggressive behaviours ($p<0.05$) in these children.

Conclusion: Negative parenting practices may lead to aggression in children with behaviour disorders. While positive reinforcement by parents may encourage less self-harm in these children and help improve their behaviour problems.

Keywords: Aggression, Attention deficit hyperactive disorder (ADHD), Autism spectrum disorder (ASD), Childhood behavior disorders, Parenting practices, Social communication disorder (SCD).

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INTRODUCTION

Childhood behaviour disorders (Autism Spectrum Disorder-ASD, Attention-deficit hyperactivity disorder-ADHD, and Social Communication disorder-SCD) are characterised by variable cognitive abilities and adaptive functions.¹ Parenting style is one of the major factors that directly and indirectly affect children's psychological development.² Parents of children with disabilities are at risk for cognitive and emotionally neglectful parenting.³

The socialization and communication deficits in children with ASD affect parenting negatively and lead to over-protective and controlling parenting behaviours and decreased parental warmth.^{4,5} Similarly, parents of children with ADHD are more likely to use more negative control strategies and harsh discipline, show low levels of parental support, and engage in poorer-quality strategies during problem-solving tasks that directly contribute to problematic child behaviour.^{6,7} Prevalence of aggression in ASD is between

35–50%,¹ and approximately 54% in children with ADHD. In a previous study, it was found that 56% of parents of children with ASD reported their child currently engaging in some degree of physical aggression towards caregivers, while 49% engaged in aggression towards individuals outside the family at some point.^{8,9} Aggression is significantly associated with self-injury, sleep problems, sensory problems, communication and social functioning.¹⁰

Although some research has explored parenting behaviour in this population, most studies have focused on perceptions, parental stress and coping strategies. To our knowledge, many parenting behaviours in the context of the ASD/ADHD parent-child relationship have not been studied. Therefore, the present study aimed to explore the relationship between parenting practices and aggression in children with behaviour disorders. Based on our findings, we aim to incorporate parent training on positive parenting practices for children with behaviour disorders.

METHODOLOGY

The cross-sectional was conducted at the Department of Developmental-Behavioural Paediatrics,

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Children Hospital Institute of Child Health, Lahore Pakistan, from November 2020 to January 2021. After approval from the Institutional Review Board (Ref No. 2021-276-CHICH), the Head of the Department was permitted to collect data. The sample size was calculated by G-power analysis with a medium effect size and alpha at 0.05.

Inclusion Criteria: Parents of children and children aged of 3 to 12 years diagnosed with behaviour disorders (ASD, ADHD, SCD) and showing aggressive behaviour were included in the study.

Exclusion Criteria: Children with severe developmental delay, cerebral palsy, visual or hearing impairment and chronic conditions like asthma, cystic fibrosis, tuberculosis, underlying cardiac disease etc., were excluded.

Eighty-five(85) children along with their parents were enrolled in the study using a consecutive sampling technique. Two children left the study after initial parental consent because of time constraints, and eighty-three(83) children completed the study. Parents were enrolled after taking written informed consent. Demographic form and all measures were administered individually to the participants while maintaining confidentiality. Parents were also given right to quit at any time or ask any questions related research.

The Multidimensional Assessment of Parenting Scale (MAPS) was used to assess positive and negative parenting practices.¹¹ It consisted of 34 items. The positive parenting practices dimension of the MAPS comprises four subscales, namely, Proactive Parenting (PP), Positive Reinforcement (PR), Warmth (WM) and Supportiveness (SP). The negative parenting practices dimension of the MAPS comprises three subscales, named, Hostility (HS), Lax Control (LC), and Physical Control (PC). Parents responded to each item using a 5-point Likert rating scale from 1=never to 5=always. All subscales were scored separately, and the total positive parenting practices/positive broadband parenting (BPP) score was also calculated.¹² Urdu translation was done through the "forward- and back-translation" method using MAPI guidelines by developmental paediatricians and clinical psychologists who were fluent in English and Urdu. For parents of children with ASD, the Cronbach's alphas were 0.80, 0.82, 0.82, 0.76, 0.83, 0.70, and 0.85 for PP, PR, WM, SP, HS, LC, and PC subscales, respectively.¹³

The Modified Overt Aggression Scale (MOAS) was used to assess children's aggressive behaviours. It assessed physical, verbal, property and self-aggression

over the past 12-months. Each of the four aggressive dimensions used a five-point severity scale (0=no such behaviour to 4 = highest level of such behaviour). The scores on each dimension were then measured: verbal aggression score was multiplied by 1; aggression against property was multiplied by 2; auto-aggression was multiplied by 3; and physical aggression was multiplied by 4. The sub-scores were sum-med to provide a total MOAS score (Range: 0-40).¹¹

(SPSS) version 25.0 was used for the data analysis. Quantitative variables were summarized as Mean±SD and qualitative variables were summarized as frequency and percentages. Correlation analysis and regression analysis were done to see the prediction between parenting practices and aggression in children with behaviour disorders.

RESULTS

Out of 83 children, 69(83.1%) had ASD, 10(12%) had SCD and 4(4.9%) had ADHD. The mean age of mothers was 33.00 ± 4.77 years, and of fathers was 38.00 ± 5.93 years. The mean age of children with behaviour disorders was 63.00 ± 26.15 months. 38(45.8%) children were firstborn. 15(18.1%) children with behaviour disorders were on psychotropic medication (Risperidone, Methylphenidate or Atomoxetine). 17 (20.5%) participants had a history of mental illness in their family, while 25(30.1%) had a first-degree relative with a neurodevelopmental disorder (Table-I).

Table-I: Demographic Characteristics of the Participants (n=83)

Characteristics	n(%)
Diagnosis	
Autism Spectrum Disorder	69(83.1)
Social Communication Disorder	10(12.0)
Attention Deficit Hyperactive Disorder	4(4.9)
Gender	
Male	71(85.5)
Female	12(14.5)
Family System	
Nuclear	43(51.8)
Joint	40(48.2)
Birth Order	
First born	38(45.8)
Middle born	22(26.5)
Last born	23(27.7)
Socioeconomic Status	
Low	15(18.1)
Middle	64(77.1)
High	4(4.8)
Any Psychological Illness in Family	
Yes	17(20.5)
No	66(79.5)
First Degree Relatives with Neurodevelopmental Disorder	
Yes	25(30.1)
No	58(69.9)
Psychotropic Medication	
Yes	15(18.1)
No	68(81.9)

Maternal education correlated negatively with total aggression ($p<0.05$). Thus, lower maternal education was associated with more aggression in children. Among parenting behaviours, excessive physical control was associated with increased aggression against property, physical aggression and total aggression

of physical aggression ($p<0.01$) and total aggression ($p<0.001$). In contrast, physical control positively predicted total aggression ($p<0.05$). Positive reinforcement negatively predicted auto aggression ($p<0.05$). Supportiveness was also a significant negative predictor of verbal aggression ($p<0.01$) (Table III & IV).

Table-II: Correlation for Multidimensional Parenting and Aggression (n=83)

Vari-able	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.Age	-																
2.Gender	-0.18	-															
3. ME	-0.08	0.22	-														
4. IN	-0.09	0.28*	.35**	-													
5. PP	0.11	0.10	0.25*	0.33**	-												
6. PR	0.13	-0.02	0.25*	0.25*	.66**	-											
7. WM	-0.04	0.04	0.19	0.14	.40**	0.54**	-										
8. ST	0.05	-0.05	0.28*	0.32**	.70**	0.74**	.46**	-									
9. HS	0.01	-0.07	-0.13	-0.02	0.01	-0.22	-0.23	-0.23	-								
10. LC	-0.05	-0.22	-0.28*	-0.13	-0.22	-0.22	-0.07	-0.09	0.16	-							
11. PC	0.01	-0.15	-0.15	-0.01	-0.11	-0.20	-.30*	-0.20	.73**	0.26*	-						
12.BPP	0.09	0.04	0.29*	0.33**	.91**	0.87**	.63**	.87**	-0.15	-0.21	-0.21	-					
13. VA	0.04	0.13	-0.02	-0.18	0.03	-0.02	0.04	-0.17	-0.09	-0.06	-0.11	-0.03	-				
14. AP	0.10	-0.04	-0.06	-0.19	0.06	-0.01	-0.00	-0.01	0.17	0.25*	0.25*	0.02	-0.00	-			
15. AA	0.06	-0.16	-0.15	-0.24*	-.26*	-.37**	-0.08	-.26*	-0.01	0.29*	0.07	-0.30*	-0.05	0.04	-		
16. PA	-0.03	-0.01	-0.24	-0.09	-0.06	-0.09	-0.04	-0.07	0.18	.38**	0.25*	-0.08	0.09	0.19	0.13	-	
17. TA	0.05	-0.09	-.25*	-0.27*	-0.15	-0.23	-0.06	-0.17	0.15	.45**	0.28*	-0.19	0.16	53**	0.53**	80**	-
M	61.57	0.17	13.81	71114.29	16.67	14.48	12.17	10.17	18.54	22.24	10.28	53.50	1.11	3.51	4.54	7.37	16.64
	±	±	±	±	±	±	±	±	±	±	±	±	±	±	±	±	±
	25.35	0.38	3.21	59343.89	5.14	2.94	1.84	2.93	4.49	4.01	2.72	1.93	0.47	1.87	2.27	3.31	4.94

ME = mother's education; IN = income; PP = proactive parenting; PR = positive reinforcement; WM = warmth; ST = supportiveness; HS = hostility; LC = lax control; PC = physical control; BPP = broadband positive parenting; VA=verbal aggression; AP=aggression against property; AA = auto-aggression; PA = physical aggression; TA = total aggression

Table-III: Multiple Regression (Enter method) for Multidimensional Parenting as Predictors of Verbal Aggression and Aggression against property (n=83)

Variables	Verbal aggression						Aggression against property							
	Unstandardized Coefficient		Standardized Coefficient		Beta	t	p- value	Unstandardized Coefficient		Standardized Coefficient		Beta	t	p- value
	B	SE	Beta	t				B	SE	Beta	t			
Constant	1.38	0.61				2.25	0.02	-1.28	2.46				-0.53	0.61
PR	-0.01	0.04	-0.09	-.34	0.74	-0.08	0.16	-0.12	-0.47	0.64				
Warmth	-0.01	0.04	-0.04	-.27	0.79	-0.03	0.17	-0.02	-0.15	0.88				
Supportiveness	-0.11	0.04	-0.71	-2.60	0.01	-0.15	0.17	-0.24	-0.88	0.38				
Hostility	-0.02	0.02	-0.15	-0.83	0.41	-0.03	0.08	-0.07	-0.39	0.69				
Lax control	0.00	0.02	0.02	0.13	0.89	0.11	0.06	0.24	1.85	0.07				
Physical control	-0.01	0.03	-0.03	-0.16	0.87	0.18	0.13	0.26	1.41	0.16				
BPP	0.03	0.02	0.66	1.65	0.11	0.08	0.07	0.44	1.09	0.28				

SE=standard error; PR=positive reinforcement; BPP=broadband positive parenting

($p<0.05$). Positive reinforcement ($p<0.01$) and positive broadband parenting ($p<0.05$) were negatively correlated with auto aggression; thus, positive parenting calmed children down. (Table-II).

Multiple regression analysis (Enter method) was used for multidimensional parenting subscales to separately predict each domain of aggression in children. Lax control emerged as a significant positive predictor

DISCUSSION

This study aimed to find the association between parenting practices and aggression in children with behaviour disorders (ASD, ADHD and SCD). In addition, our study also explored possible demographic factors contributing to aggression in these children.

In the present study, it was found that income was negatively correlated with aggression which

Table-IV: Multiple Regression (Enter method) for Multidimensional Parenting as Predictors of Auto Aggression, Physical Aggression and Total Aggression (n = 83)

Variables	Auto Aggression				Physical aggression				Total aggression						
	Unstandar-dized Coefficient		Standar-dized Coefficient		Unstandar-dized coefficient		Standar-dized coefficient		Unstandar-dized coefficient		Standar-dized coefficient				
	B	SE	Beta	t	p	B	SE	Beta	t	p	B	SE	Beta	t	p
Constant	4.92	2.80	-	1.76	0.08	-1.89	4.20	-	-45	0.65	4.33	5.90	-	0.73	0.46
PR	-0.35	0.18	-0.46	-1.93	0.05	-0.04	0.28	-0.04	-16	0.87	-0.41	0.38	-0.24	-1.05	0.29
Warmth	0.16	0.19	0.13	0.84	0.41	0.03	0.29	0.02	0.11	0.91	0.17	0.41	0.06	0.41	0.68
Supportiveness	-0.11	0.19	-0.14	-.53	.59	-0.12	0.29	-0.11	-.39	.69	-0.38	0.42	-0.23	-0.91	0.37
Hostility	-0.11	0.09	-0.21	-1.19	0.24	-0.02	0.13	-0.02	-.14	0.89	-0.19	0.19	-0.17	-1.01	0.31
Lax control	0.13	0.07	0.23	1.88	0.07	0.29	0.10	0.35	2.78	0.01	0.49	0.15	0.39	3.34	0.00
PC	0.10	0.14	0.12	.69	.49	0.23	0.22	0.19	1.07	.29	0.54	0.30	0.29	1.78	.08
BPP	0.04	0.08	0.17	.45	.65	0.04	0.12	0.14	.36	.72	0.13	0.17	0.29	.81	.42

SE = standard error; PR = positive reinforcement; PC = physical control; BPP = broadband positive parenting

means that parents from low-income families showed more aggression towards children with behaviour disorders. This finding relates to a previous study, they reported a moderate correlation between parent income and behaviour outcomes in children with ASD.¹⁴ Similarly, low socioeconomic status has been reported as a risk factor for aggression in ADHD by Russell *et al.*¹²

In the present study, positive parenting and positive reinforcement were associated with lesser auto aggression in children with behaviour disorders. This finding is consistent with other studies that showed that positive parenting significantly reduced child maladaptive behaviours, improved child, parent and family functioning and reduced parental stress.^{15,16}

Our study also showed that more physical control by parents led to more aggression in children. There has been significant evidence that parents of children with behaviour disorders exhibit high levels of physical control and over-protectiveness.^{3,17} Many parents reported that they did not explain tasks, give clear choices or explain the consequences of misbehaviour to their child with a behaviour disorder, as he/she could not understand their commands.

In the current study, lax control emerged as a significant positive predictor of total and physical aggression. In a recent study, parents of children with ASD showed more lax control than typically developing children.³ Another study revealed that mothers set fewer rules and fewer discipline strategies for children with ASD.¹⁸ In another study, reactive aggression was also reported in children with ADHD, where parents showed low authoritative parenting and exhibited more permissive parenting/lax control. It

was also seen that a lack of parental supervision exacerbated problematic behaviours.¹⁹

Thus, considering the above findings, promoting positive parenting practices like less physical control, more consistent parenting behaviours, and increased positive reinforcement towards children with behaviour problems can help parents improve aggression in these children, reduce parental stress and stimulate their positive development.

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LIMITATIONS OF STUDY

Our study was carried out on the children with behaviour disorders without a control group of typically developing children.

CONCLUSION

Negative parenting practices are associated with aggressive behaviours in children with behaviour disorders. Moreover, parents' positive reinforcement may help improve aggression in these children and reduce selfinjurious behaviour. Parenting behaviour is important in modifying problematic behaviours in the specified population. Therefore, developing strategies targeting parentchild interactions and focusing on developing positive parenting skills is imperative.

Conflict of Interest: None.

Author's Contribution

Following authors have made substantial contributions to the manuscript as under:

FR & SM : Study design, drafting the manuscript, data interpretation, critical review, approval of the final version to be published.

AA & TM: Data acquisition, data analysis, concept, approval of the final version to be published.

HA & AF: Critical review, drafting the manuscript, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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