International Journal of Community Medicine and Public Health
Vadaga VR et al. Int J Community Med Public Health. 2023 Aug;10(8):2908-2912
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20232388

Original Research Article

Fearful versus loving parents: a cross-sectional study in Mysuru city to assess influence of parenting style on ADHD

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Received: 18 June 2023
Accepted: 19 July 2023

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ABSTRACT

Background: Attention Deficit Hyperactivity Disorder (ADHD) is a common childhood neurodevelopmental disorder. There are various genetic and social factors implicated in the development of ADHD. One of the factors is parenting style. Thus, the present study was undertaken to assess the various parenting styles present in the population and the statistical association between parenting style and ADHD prevalence.
Methods: A cross- sectional study among 470 primary school students was undertaken in Mysuru district. Oral assent from students and written consent from parents was obtained for collection of data. Data was entered in MS Excel and analysed using Chi- square/Fisher's Exact test. $p<0.05$ was considered to be statistically significant.
Results: The present study found that majority of mothers and fathers were supportive towards their children, 260 (56.4%) and 246 (53.02%) respectively. It was found that majority of the parents 324 (68.93%) preferred to sit down and reason with their children. ADHD scores for inattention showed a statistical significance with father's parenting style ($p= 0.044$). However, mother's parenting style did not show any association with ADHD scores.
Conclusions: The development of regular, structured parent management programmes would be helpful in improving parents' knowledge about ADHD children and changing their attitudes towards them.

Keywords: ADHD, Childhood, Impulsive, Neurodevelopmental disorder, Parenting styles

INTRODUCTION

One of the most prevalent childhood neurodevelopmental diseases is Attention Deficit Hyperactivity Disorder (ADHD). It is frequently diagnosed for the first time as a child and the symptoms continue throughout adulthood. Children with ADHD could have problems concentrating, controlling impulsive behaviors (they might act without considering the consequences), or being extremely active. Children frequently struggle with attention spans and manners, which is normal. But among children with ADHD, this behavior cannot simply fade away. The symptoms persist, can be severe, and can make interacting with family, friends, or colleagues difficult.[1]

Systematic reviews show that the global community prevalence ranges from 2% to 7%, on average hovering around 5%. At least 5% of children struggle significantly with excessive activity, inability to pay attention, and impulsivity but do not fully align with the diagnostic criteria for ADHD. Globally, there are several different estimates of the administrative prevalence (clinically diagnosed or registered), and they have been rising over time. However, most nations continue to underrecognize and underdiagnose ADHD, particularly in older children and girls.[2]

Contrary to popular belief, which holds that adult ADHD and childhood ADHD impact the same population and have a common neurodevelopmental aetiology, more than

two-thirds of those with adult ADHD have also experienced childhood ADHD.[3] Although several studies suggest that genes have a substantial impact, the exact cause of ADHD is still unknown. ADHD most certainly has an array of reasons, just like many other conditions. Researchers are investigating possible environmental risk factors for ADHD in addition to genetics, as well as how brain injury, diet, and social situations may be connected to the illness. Males are more likely than females to have ADHD, although symptoms that are primarily related to inattention are more common in females with ADHD. Learning difficulties, anxiety disorders, behaviour disorders, depression, and substance use disorders are among the various conditions that are frequently present in people with ADHD.[4]

The two key components of parenting behavior are effective behavioral control and emotional responsiveness to the child. There are four general broad parenting styles that can be identified using these two dimensions: (1) authoritarian parents; (2) indulgent parents; (3) neglecting parents; and (4) authoritative parents. Children with ADHD require greater effort from their parents in order to improve behaviour, boost academic performance, and compensate for instability. Conflict and stress are increased because these parents have a propensity to interpret their children's actions as malicious. Children with ADHD exhibit symptoms that make their parents less engaging and affectionate than other parents. Despite the widespread use of medicine to treat ADHD, psychosocial therapy is uncommon in most countries. Communities must dedicate resources to psychosocial treatment for it to show a significant improvement in children's functioning and health.[5] BPT is an evidence-based psychosocial treatment that focuses on increasing positive and decreasing negative parenting through instruction and practice in effective caregiving strategies. It has been developed for parents of children with ADHD and associated behaviour problems. Through the promotion of successful parenting techniques, it is intended to indirectly promote long-lasting improvement in a child's behaviour. In particular, parents should keep a close eye on their children's performance and behaviours. They should also set clear expectations and consistently convey both good and bad results. Hence, this study aims to assess the various parenting styles in the population and to assess the association of parenting style with ADHD.

METHODS

A cross-sectional study was conducted among primary school children (6-11 years) in Mysuru District. The study was conducted over a period of 2 months (January 2021- February 2021). Students studying in primary classes (1-6th standard) were included in the study. Specially-abled children were excluded. Ethical committee clearance was obtained before commencing the study.

Assuming the expected prevalence of ADHD as 11.32%, with absolute precision of 3% and a confidence interval of 95%, a sample size of 428 primary school children was studied. Sample size was calculated using the formula[6]:

$$\text{Sample size, } n = \frac{Z_{\alpha}^2 PQ}{L^2}$$

Where, Z = Z score for 95% confidence interval (1.96), P = Prevalence of ADHD (11.32%), Q = 100-P, L = Allowable error (3%).

$$\text{Sample size, } n = \frac{(1.96)^2 \times 11.32 \times 88.68}{3x3} = 428$$

Taking a non-response rate of 10%, the final sample size was estimated to be 470.

Convenient sampling was employed to include 5 schools in Mysuru district for the study. Each of these schools had nearly the same strength of students in each class. After approaching the principals of the schools and obtaining their permission, simple random sampling was employed to choose students from each class until the desired sample size was obtained. Oral assent was obtained from the participant and written consent from the parents. The students were handed over a copy of the questionnaire and consent form to be filled at home by the parents. Students were instructed to return the completed forms within a week from distribution.

The questionnaire consisted of 2 parts: Part 1 comprised socio-demographic data of the child, and Part 2 asked about the parenting style of both parents. The name/ other identification details of the student were not recorded anywhere thus ensuring anonymity of the student's identity. Data obtained was entered in MS Excel spreadsheet followed by analysis using SPSS version 26 (licensed to JSSAHER). The demographic characteristics such as age and gender, family composition, etc. were represented as percentages, mean and standard deviation. The associations between the parenting style and the categorized ADHD score were found using Chi- square test/Fisher's exact test. A 'p-value' less than 0.05 was considered to be statistically significant. Bar and pie charts, and tables were used wherever necessary.

RESULTS

A total of 470 responses was obtained for this study. There were 237 (50.4%) males and 233 (49.6%) females with a mean age group of 8.4±1.58 years.

In the study, the majority (89%) belong to Hindus followed by Muslims (10%) and Christians (1%). Around 65% of participants belong to nuclear family whereas 18% belong to joint family, 14% belong to three-generation family and 3% were having a single parent (Table 1).

Table 1: Socio-demographic characteristics of the population.

Variables		N	%
Religion	Hindu	418	89
	Muslim	49	10
	Christian	3	1
Type of family	Nuclear	306	65
	Joint family	85	18
	Three- generation family	64	14
	Single parent	15	3

A total of 464 father's and 461 mother's parenting style was obtained. This was in concurrence with the presence of 15 single parent families in the study population. Among the responses it was found that majority of mothers and fathers were supportive towards their children, 260 (56.4%) and 246 (53.02%) respectively, followed by being strict-154 (33.2%) fathers and 149 (32.32%) mothers. Neglectful parenting style was reported from fathers (20, 4.3%). Democratic parenting style was reported among 28 (6.03%) fathers and 36 (7.81%) mothers (Figure 1).

Table 2: Demographic profile of the parents.

Variables		Mother		Father	
		N	%	N	%
Education	Postgraduate	2	0.43	3	0.6
	Graduate	67	14.25	55	11.7
	Intermediate/diploma	101	21.5	92	19.6
	High school	166	35.32	174	37
	Middle School	91	19.36	78	16.6
	Primary School	34	7.23	68	14.5
Occupation	Professionals	1	0.2	0	0
	Technicians and associate professionals	47	10	26	5.53
	Clerks	64	13.61	8	1.7
	Skilled workers and shop and market sales workers	34	7.23	10	2.12
	Plant and machine operators and assemblers	119	25.31	11	2.34
	Elementary occupation	205	43.61	47	10
	Unemployed/ homemakers	0	0	368	78.29

It was found that majority of the parents 324(68.93%) preferred to sit down and reason with their children. This was followed by 65 (13.82%) preferred to beat their child and 52 (11.06%) compared their child to their own siblings/peers (Figure 2).

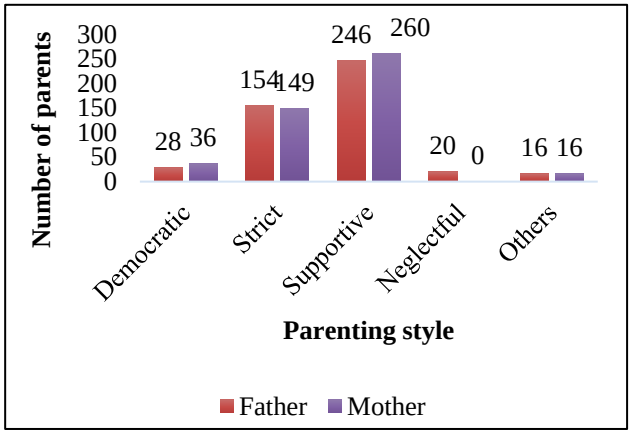

Figure 1: Summary of the parenting style of the parents.

Though mothers' parenting style did not show any association with ADHD scores (p= 0.559), an association was found to be present between fathers' parenting style and the ADHD score for inattention (p= 0.044). The majority of the fathers' believed they had a supportive style (51.9%) when dealing with their children, followed by a strict (33.3%) and neglectful (14.8%) approach (Table 3).

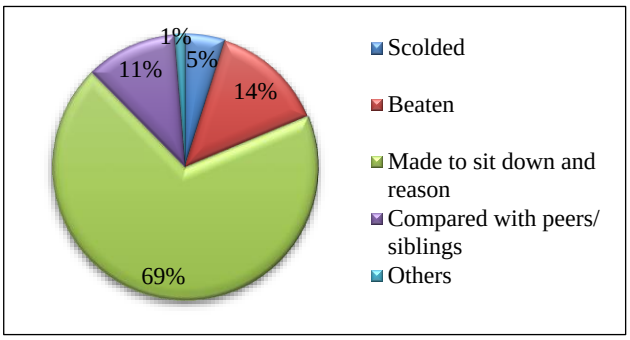

Figure 2: Summary of the parents' preferred method of making them realize their mistake.

In the current study, there was no association found between fathers' and mothers' parenting style and ADHD score for impulsivity/hyperactivity. The majority of fathers (55%) believed that they had a supportive parenting style while dealing with the impulsivity/ hyperactivity of their children with ADHD where 50% of

mothers believed they had a supportive approach while other 50% believed they had a strict approach in dealing with the impulsivity/ hyperactivity of their children with ADHD (Table 4).

Table 3: Association between ADHD score for inattention with parenting style.

Variables		ADHD present N (%)	ADHD absent N (%)	Chi- square value	p- value
Father's parenting style	Democratic	0 (0)	23 (5.3)	9.775	0.044
	Strict	9 (33.3)	145 (33.2)		
	Supportive	14(51.9)	237 (54.2)		
	Neglectful	4 (14.8)	16 (3.7)		
	Others	0 (0)	16 (3.7)		
Mother's parenting style	Democratic	1 (3.7)	27 (6.2)	2.066	0.559
	Strict	12 (44.4)	137 (31.6)		
	Supportive	13 (48.1)	255 (58.8)		
	Others	1 (3.7)	15 (3.5)		

Table 4: Association between ADHD score for impulsivity/ hyperactivity with parenting style.

Variables		ADHD present N (%)	ADHD absent N (%)	Chi- square value	p- value
Father's parenting style	Democratic	0 (0)	23 (5.2)	3.350	0.501
	Strict	7 (50)	147(33.1)		
	Supportive	11 (55)	240(54.1)		
	Neglectful	2 (10)	18 (4.1)		
	Others	0 (0)	16 (3.6)		
Mother's parenting style	Democratic	0 (0)	28 (6.3)	3.812	0.282
	Strict	9 (50)	140 (31.6)		
	Supportive	9 (50)	259 (58.5)		
	Others	0 (0)	16 (3.6)		

DISCUSSION

On assessing possible association between parenting style and scores of ADHD, inattention subtype showed statistical significance with father's parenting style (0.044). Most of the fathers answered that they preferred a supportive approach (51.9%) when interacting with their children, followed by a strict approach (33.3%).

Study by Allmann et al showed that the maternal parenting style at age 6 had an effect on the child symptoms at age 9. Authoritative mothering predicted fewer ADHD than authoritarian with permissive parenting. The child's symptoms also showed a difference in parenting style. It was found that a child having affective symptoms has a more protective and permissive parenting. Child ADHD at age 6 predicted a greater controlling/authoritarian parenting at age 9. Fathers' authoritarian parenting predicted a higher level of ODD from ages 6-9. Overprotective fathering predicted more affective symptoms in children at 9.[7]

Rezaeefard conducted a study among mothers of children with ADHD to understand the role of resilience and parenting style to predict parenteral stress. He found that there a significant negative relationship between resilience and parenteral stress in mothers with ADHD children. He also found that there was a positive relationship between authoritarian and negligent parenting and parenteral stress.[8]

Study conducted by Shahinuzzaman et al among 386 parents from Dhaka City showed authoritarian parenting, uninvolved parenting, and permissive parenting practice were positively and significantly correlated with children's attention and hyperactivity problem. However, authoritative parenting practice showed a minimal correlation between a child's attention and hyperactivity problem.[9]

CONCLUSION

The study concludes that the majority of the parents 324(68.93%) preferred to sit down and reason with their children while a significant 65 (13.82%) preferred to beat their child and 52 (11.06%) compared their child to their own siblings/peers. Even though the dominant parenting style was supportive in the study but a significant percentage of strictness was seen in the mothers' attitude towards their ADHD children. There should be an establishment of structured and frequent parent management programs which would be effective in expanding and understanding of parents and modifying their outlook towards ADHD children.

Funding: No funding sources
Conflict of interest: None declared
*Ethical approval: The study was approved by the Institutional Ethics Committee (*JSS/MC/PG/5156/2020-21)

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Cite this article as: Vadaga VR, Murthy NMR, Kumar SD, Rakesh M. Fearful versus loving parents: a cross-sectional study in Mysuru city to assess influence of parenting style on ADHD. Int J Community Med Public Health 2023;10:2908-12.