

Managing Stress: Exploring Teachers' Perceptions of Inattention, Hyperactivity, and Impulsivity in Students with ADHD

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ABSTRACT

Background: Attention Deficit Hyperactivity Disorder (ADHD) is neurodevelopmental Disorder that affects 10% of school age children. These children suffer from low self-esteem, troubled relationships and academic backwardness. Teachers have very little knowledge in identifying, assessing, monitoring and reporting of the disorder.

Aim: The present study focuses on the comparative perception of children exhibiting ADHD symptoms by teachers from Government aided and private aided and unaided schools.

Material and Methods: This study was conducted in different Government, Private aided and unaided Schools in Karnataka, India with a sample size of 500 from 37 schools. Random sampling method was utilized with a descriptive study design. Conner's scale was administered to teachers to identify children exhibiting ADHD symptoms. The data was analyzed by applying one-way Anova,,Pair wise comparison followed by Tukey's Multiple Post-hoc Procedures test.

Results and conclusion : There is significant difference between teachers of Government, Private aided and Private unaided schools with respect to inattention, hyperactivity, impulsivity symptoms. No significant difference was perceived between male and female teachers. Hence the teachers' knowledge regarding ADHD has to be promoted. Teachers have to be assisted in gaining knowledge and misconceptions about ADHD with management solutions through collaborative partnership. An evidence-based in-service education can improve teachers attitude and increase their understanding of the symptoms exhibited to assess the child's educational strengths and weakness at the early stages of development.

Key Words: ADHD , Perception, School

INTRODUCTION

Attention deficit hyperactivity disorder affects approximately 10% of school-age children causing constant inattention, hyperactivity, and impulsivity. These behaviors persist at home, school, or work, making it challenging for t to pay attention and control impulses.

ADHD, affecting 2% to 6% of preschoolers and 3% to 10% of school-age children in the West, poses significant challenges across various domains of life. In preschoolers, ADHD

symptoms, predominantly the hyperactive-impulsive subtype, often persist into school years, leading to severe impairment and increased co-morbidities. Academic difficulties, disruptive behavior, and impaired social functioning are common, with nearly a quarter facing speech or language issues. They are at heightened risk for accidents and injuries due to impulsive behavior. In school-age children, ADHD is associated with low academic achievement, conduct issues, and emotional problems, with boys being more affected than girls. Academic struggles stem from difficulties with engagement and inconsistent task completion rather than skill deficits. Roughly 30% also have learning disabilities. Adolescents with ADHD face continued challenges, including academic underachievement, school dropout, legal issues, and higher rates of teen pregnancies. Academic performance and social relationships suffer as a result with 15 to 30% experiencing learning disabilities requiring special educational programs. Teachers have to intervene using behavioral psychology, investing extra time and effort to support these students. leading to increased time and energy demands.

This calls for the creation of caring and „child-friendly“ (the term UNICEF has put forward) school systems that is effective in organizing their resources and function in ways that ensure achievement of the goals set for education. The challenge is to provide the upcoming generation with the awareness, abilities and mental strength they need to take responsibility for their own lives, and to make their contribution to society

Early identification and intervention are crucial to mitigate these long-term impacts on individuals' academic, social, and emotional well-being. Teachers hold a crucial position in children's lives, often being the first to observe difficulties in those with ADHD due to their daily interactions. Managing children with ADHD can induce stress in teachers, leading to more negative interactions. Teacher perceptions and expectations significantly influence their interactions, subsequently impacting children's behavior and academic performance. Parenting children with ADHD requires immense patience and consistency, given the challenges such as maintaining focus and listening. The family environment is seen as the primary context for developing dysfunctional attitudes and behaviors, potentially resulting in low self-esteem, depression, anxiety, and antisocial tendencies in children with ADHD. Addressing these challenges necessitates a collaborative effort between teachers, parents, and support systems to foster positive outcomes for children with ADHD.

Canals, J., and Hidalgo, P. M. (2018)-*The study in Catalonia, Spain, examined 1,104 preschoolers (ages 3 to 6), finding a 5.40% ADHD incidence. Risk factors included male gender and first-born status. Parents' reports indicated more symptoms than instructors, and ADHD was associated with behavioral problems, autism spectrum disorders, and obsessive-compulsive issues with tics.* Gray, J. (2014).. *ADHD is a measurable impairment of normal brain function due to oxidative stress, not just a mental issue. Modern brain scans show clear differences.*Berk,L. E.(2013). *In unmarried-parent households, meeting children's needs for love, time, and attention can be challenging, especially during destabilizing events.* Research suggests that about 60% of ADHD cases continue into adulthood, with symptoms changing over time. Stimulants benefit 75-90% of children, but long-term outcomes on peer relationships and educational abilities remain unclear .Candelas et al. (2017) found that children with ADHD symptoms had

emotional understanding difficulties and impaired regulation compared to typically developing children. Researchers have investigated primary school teachers' comprehension of ADHD symptoms and their classroom management strategies when dealing with children with ADHD. Topkin, and Nicoette, V. (2010).. *Involving 200 South African faculty instructors, the study assessed their ADHD knowledge using the KADDS questionnaire. On average, 45% correctly identified responses. Teachers were more familiar with general ADHD features than specific symptoms, diagnosis, and treatment. Many instructors reported having received training on ADHD.* Guerra et al. (2017) found that most teachers lacked ADHD coursework. Limited administrative support and professional development hindered inclusion.

ADHD research gaps include: long-term treatment outcomes, effective interventions for preschoolers, , impact on family dynamics, teachers' understanding and training, and comorbidities/socio-demographic factors. Investigating these areas can improve ADHD management and support throughout individuals' lives. Dilawari, K., Tripathi, N. (2014) Researchers have expressed the need to bridge the gap among school professionals and to prepare individualized intervention plan. Hence the present study aims to Compare the perception of ADHD symptoms (inattention, hyperactivity, impulsivity) in children from teachers in government, private-aided, and unaided schools and suggest some appropriate practices to reduce the symptoms

MATERIALS AND METHODS

Methods

- ***Participants and method of sampling***

A sample of 500 students was randomly selected from 37 schools

- ***Participants selection criteria***

Based on the academic records (report cards),daily learning teachers identified children

- ***Inclusion criteria:***

- 1st -7th std of primary/upper primary schools in the age group from (6-12) years were selected for study

- ***Exclusion criteria:***

Children from Secondary schools that is from 8th -10th std are excluded from the study.

- ***Study Design***

Descriptive research design is used for this quantitative study

- ***Variables of the study***

Independent variable: Teachers

Dependent Variable: Inattention, Hyperactivity. Impulsivity

- **Data collection procedure** Permission was obtained from the BEO in July 2016, and a pilot study was conducted in August 2016. The fieldwork involved visiting 37 schools covering different types. Teachers and parents were involved in identifying children with ADHD symptoms. Data collection concluded by May 2017 with 500 children included in the study. Interviews were conducted at schools and residences, using regional languages and English.
- **Data collection tools**- Interview schedules, questionnaires, and scales were used .Conners scale was employed. This scale is commonly used to screen for ADHD in children and adolescents and can be used during follow-up appointments to monitor behavioral changes. Conners Teacher Rating Scale (CTRS-R) Long Form versions with 59 items
- **Sample size:** Total 37 schools were selected ,17 govt schools,12pvt aided schools, and 8 pvt unaided schools. The total population of the children was 3000 and finally 500 children gave their consent and there were 700 teachers out of which 250 were ready to participate The sample size was determined by using Morgan table
- **Ethics**- The data was collected after obtaining the consent letter of the participants. They were given information on the purpose and objectives of the study and their right to withdraw at any time and Confidentiality will be assured
- **Statistical Analysis**

The data was analysed in accordance by applying one-way ANOVA, followed by Turkey's multiple post-hoc procedures. Pair wise comparison, t test were applied

RESULTS

Table No 1:Demographic profile of the Children exhibiting ADHD symptoms

| Profile | Levels | No of respondents | % of respondents |
|---------------------------|---------------------------------------|-------------------|------------------|
| Age of the Respondents | 6 to 8 years | 148 | 29.6 |
| | 8 to 10 years | 216 | 43.2 |
| | 10 to 12 years | 136 | 27.2 |
| Gender of the respondents | Male | 357 | 71.4 |
| | Female | 143 | 28.6 |
| Class of the respondents | 1 st – 5 th std | 364 | 72.8 |
| | 5 th -7 th std | 136 | 27.2 |
| Type of School | Govt. School | 17 | 45.9 |
| | Private Aided School | 12 | 32.4 |
| | Private unaided school | 08 | 21.6 |
| Medium of instruction | English | 220 | 44 |
| | Other medium | 280 | 56 |

IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES

ISSN PRINT 2319 1775 Online 2320 7876

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|--------------------------|---------------------------|-----|------|
| Total number of teachers | Government | 110 | 44 |
| | Private aided and unaided | 140 | 56 |
| Type of Family | Nuclear family | 375 | 75 |
| | Joint family | 125 | 25 |
| Number of Family members | 1 to 2 members | 100 | 20 |
| | 3 to 4 members | 350 | 70 |
| | 5 to 6 members | 50 | 10 |
| No. of Siblings | 1 to 2 siblings | 280 | 56 |
| | 3 to 4 siblings | 178 | 35.6 |
| | 5 to 6 siblings | 42 | 8.4 |
| Socio-economic Status | High class family | 13 | 2.6 |
| | Middle class | 301 | 60.2 |
| | Lower class | 186 | 37.2 |
| Father Education | Primary | 64 | 12.8 |
| | Secondary | 190 | 38 |
| | Intermediate | 145 | 29 |
| | Graduation | 77 | 15.4 |
| | Others | 24 | 4.8 |
| Mothers Education | Primary | 150 | 30 |
| | Secondary | 200 | 40 |
| | Intermediate | 100 | 20 |
| | Graduation | 35 | 7 |
| | Others | 15 | 3 |

From the above table its revealed the study had 500 respondents in total. The majority of respondents were between 8 to 10 years old (43.2%), most were male (71.4%).The majority of children (72.8%) were in 1st to 5th standard. English was the medium of instruction for 44%.Most children came from nuclear families (75%) with 3 to 4 family members (70%). About 56% of respondents had 1 to 2 siblings.,middle-class category (60.2%).Father's having secondary education (38%).Mother's education with 40% having secondary education.

TableNo-2:Results of ANOVA Test Perceived between Teachers of Government- Pvt aided and Unaided Schools with respect to Inattention, Hyperactivity and Impulsivity Symptoms of ADHD in Children.

| Variable | Sources of Variation | Degrees of Freedom | Sum of Squares | Mean sum of Squares | F-value | p-value |
|---------------|----------------------|--------------------|----------------|---------------------|---------|---------|
| Inattention | Between Schools | 02 | 174.57 | 87.29 | 13.6171 | 0.0001* |
| | Within Schools | 497 | 3185.77 | 6.41 | | |
| | Total | 499 | 3360.34 | | | |
| Hyperactivity | Between Schools | 02 | 315.31 | 157.65 | 27.1662 | 0.0001* |
| | Within Schools | 497 | 2878.46 | 5.80 | | |
| | Total | 499 | 3193.77 | | | |
| Impulsivity | Between Schools | 02 | 93.35 | 46.68 | 27.8626 | 0.0001* |
| | Within Schools | 497 | 832.60 | 1.68 | | |
| | Total | 499 | 925.95 | | | |

*p<0.05

From the results of the above table it can be seen that there is significant difference perceived between teachers of government, aided and unaided schools with respect to inattention symptoms where F=13.6171, p<0.05 ,hyperactivity F=27.1662, P<0.05 impulsivity F=27.8626 p<0.05

TableNo-3: Pairwise Comparisons of Teachers of Government, Pvt aided and Unaided Schools on Perceived Inattention, Hyperactivity and Impulsivity Symptoms of ADHD in Children by Tukey’s Multiple Post-hoc Procedures.

| Variables | Schools | Government | Pvt Aided | Pvt Unaided |
|-------------|------------|------------|-----------|-------------|
| Inattention | Mean | 15.17 | 13.82 | 14.72 |
| | SD | 2.72 | 2.57 | 1.94 |
| | Government | | | |
| | Pvt Aided | p=0.0001* | | |

| | | | | |
|---------------|-------------|-----------|-----------|------|
| | Pvt Unaided | p=0.2869 | p=0.0143* | |
| Hyperactivity | Mean | 8.01 | 6.44 | 6.39 |
| | SD | 2.72 | 1.96 | 2.25 |
| | Government | | | |
| | Pvt Aided | p=0.0001* | | |
| | Pvt Unaided | p=0.0001* | p=0.9864 | |
| Impulsivity | Mean | 5.49 | 4.82 | 4.44 |
| | SD | 1.54 | 0.99 | 1.07 |
| | Government | | | |
| | Pvt Aided | p=0.0001* | | |
| | Pvt Unaided | p=0.0001* | p=0.0568 | |

*p<0.05

From the results of the above table it can be seen that the teachers of government School perceive higher higher inattention symptoms with mean value of (15.17, hyperactivity symptoms with mean value of (8.01) ,impulsivity symptoms with mean value of (5.49) among children as compared to private aided and unaided school teachers

TableNo-4: Results of t test Perceived between Teachers of English and other Mediums with respect to Inattention, Hyperactivity and Impulsivity Symptoms of ADHD in Children.

| Variable | Mediums | N | Mean | SD | SE | t-value | P-value |
|---------------|---------|-----|-------|------|------|---------|---------|
| Inattention | other | 416 | 14.61 | 2.71 | 0.13 | -0.6328 | 0.5272 |
| | English | 84 | 14.81 | 1.97 | 0.21 | | |
| Hyperactivity | other | 415 | 7.36 | 2.54 | 0.12 | 3.5436 | 0.0004* |
| | English | 84 | 6.30 | 2.30 | 0.25 | | |
| Impulsivity | other | 416 | 5.22 | 1.37 | 0.07 | 5.7406 | 0.0001* |

| | | | | | | | |
|--|---------|----|------|------|------|--|--|
| | English | 84 | 4.31 | 1.02 | 0.11 | | |
|--|---------|----|------|------|------|--|--|

*p<0.05

The above table reveals non- significant difference perceived between teachers with respect to inattention symptoms where $t=-0.6328$, $p>0.05$ a with respect to hyperactivity symptoms $t=3.5436$, $P<0.05$ means English medium teachers perceive to have lesser hyperactivity symptoms with mean value (6.30) compared to other medium with mean value (7.36) with respect to impulsivity symptoms $t=5.7406$, $p<05$ teachers perceive to have lesser impulsivity symptoms with mean value (4.31) compared to other medium with mean value (5.22)

Table 5: Results of t test between Male and Female Teachers of Schools with respect to Inattention, Hyperactivity and Impulsivity Symptoms of ADHD in Children.

| Variable | Gender | N | Mean | SD | SE | t-value | P-value |
|---------------|--------|-----|-------|------|------|---------|---------|
| Inattention | Male | 200 | 14.73 | 2.60 | 0.18 | 0.5554 | 0.5789 |
| | Female | 300 | 14.59 | 2.59 | 0.15 | | |
| Hyperactivity | Male | 199 | 7.18 | 2.49 | 0.18 | 0.0039 | 0.9969 |
| | Female | 300 | 7.18 | 2.57 | 0.15 | | |
| Impulsivity | Male | 200 | 5.02 | 1.36 | 0.10 | -0.6564 | 0.5119 |
| | Female | 300 | 5.10 | 1.37 | 0.08 | | |

From the results of the above table, there is non-significant difference between male and female teachers related to perception of inattention symptoms where $t=0.5554$, $P>0.05$ Hyperactivity symptoms $t=0.0039$, $p>0.05$ impulsivity $t=-0.6564$, $p>0.05$

Discussion:

The data reveals a profile of respondents comprising children aged 6 to 10, with a male majority (71.4%), English medium schooling (56%), and middle-class backgrounds (60.2%).The findings from the Annova analysis reveal significant differences in inattention, hyperactivity, and impulsivity levels between school Teachers The low p-values (<0.0001*) and high F-values

suggest that variations are not due to chance. The Government school teachers perceive more symptoms. This implies that school environments may play a crucial role in shaping students' behaviors, potentially leading to targeted interventions and improved learning environments. *Pham et al. (2015) discovered a 7.7% ADHD prevalence in primary school children in South Vietnam,* Inattention scores are highest in "Government" schools followed by Hyperactivity Impulsivity scores follow a similar pattern. The findings highlight variations in these traits across school types and can aid in understanding behavioral patterns, *Ercan et al. (2015) conducted a study in İzmir, Turkey, with 419 randomly selected primary school children aged 6–14 years. The findings confirm that ADHD is highly prevalent in Turkish elementary school children,* The variables were measured in two different mediums: "other" and "English." that there are significant differences since the P-values are indicated 0.0001* for Impulsivity and 0.0004* for Hyperactivity where other medium have exhibited higher symptoms. *Nimisha and Vishnoi (2001) observed that ADHD traits, affecting attention, impulse control, and activity levels in the classroom.* There was no significant difference in the perception Male and Female Teachers of Schools *Mostafae et al. (2016) found 11.3% ADHD prevalence in boys, significantly higher (19.4%) than girls (P<0.01).*

Limitations:

- Qualitative studies were not conducted due to constraints of time
- Rigorous research designs can enhance the reliability and validity of ADHD studies,

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Visser (2001) emphasizes intervention strategies aimed at enhancing both academic performance and personal-social development in students. He underscores the significance of emotional literacy, urging teachers to cultivate awareness of it amidst the evolving societal landscape of the twenty-first century. These strategies should be rooted in problem-solving approaches, offering teachers deeper insights into student issues and a broader toolkit of effective strategies. Visser advocates for research to delve into how schools, led by competent headteachers and staff with empathetic understanding of students, implement these systemic processes to effectively support student growth and well-being.

Social workers collaborate with teachers and parents to identify and evaluate students with ADHD, facilitating the development and implementation of preventive or rehabilitation plans within group settings to foster inclusive learning environments. They provide training to school staff on effective classroom practices for diverse students and counsel parents on the importance of continuing their children's education based on their abilities. Social workers also initiate research on ADHD and offer guidance to improve interventions. They assist teachers in drafting Individual Educational Plans, facilitate home visits, and dialogue with parents to align school strategies with home environments. Serving as a bridge between families, schools, and social services, they promote academic and social success through direct counseling, advocacy, consultation, and community linkage. Comprehensive treatment programs include ADHD

education, medication, school, and family interventions, necessitating interdisciplinary collaboration for a systemic approach to care. School-based strategies target behavior control, academic performance, and social relationships, often supplemented by family-school interventions to enhance collaboration and family involvement in education. Multimodal interventions involving various professionals and mediators are essential for effectively addressing the complex challenges presented by children with ADHD.

The presented instructional practices and strategies must be designed to meet the specific educational and behavioral needs of students, particularly those with ADHD, while promoting inclusivity for all learners. By collaborating with educators and parents, individualized plans can be created to align with students' dreams and goals. Utilizing audio-visual materials and cooperative learning engages students and improves subject understanding. Addressing challenges faced by students with ADHD involves providing advance organizers, breaking down assignments, and using assistive technology. Implementing behavioral contracts, self-management systems, and peer mediation fosters positive social interactions. Involving parents as partners encourages communication and collaboration. Classroom accommodations, like low-distraction work areas, facilitate a nurturing and inclusive learning environment for all students, supporting academic and personal development

Conclusion:

Teachers' perceptions of ADHD symptoms are valuable but not a substitute for clinical diagnosis. Collaborating with healthcare professionals is crucial for early intervention. Providing structured environment, accommodations, and parental involvement support children with ADHD, fostering their academic and social development. Together, educators and healthcare experts can create a conducive and nurturing environment for these students to succeed.

Future Directions

ADHD research in children has advanced since September 2021, exploring long-term outcomes, gender differences, comorbidities, etiology, and personalized approaches. Studies also investigate the impact of technology, social media, and cultural factors on ADHD. Improving understanding and management through diverse and comprehensive research aims to provide better interventions and support for affected individuals. Hence current scientific literature and authoritative sources for the latest updates could be consulted

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