

## Identification And Diagnosis of Adhd Symptoms Among Primary School Children in Andhra Pradesh.

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### Abstract

The main purpose of this study is to identify and diagnose the prevalence of Attention deficit hyperactivity disorder (ADHD) among primary school children in and around Vijayawada, Krishna district, Andhra Pradesh, India and to understand the methods and the interventions the teachers employ in managing this disorder in the schools. This study employed a descriptive survey research design. 584 teachers were randomly selected from the population of government and private primary school teachers in and around Vijayawada. The sample of the teachers comprised of 400 female and 184 male teachers with a minimum of five years of teaching experience. The questionnaire used was NICHQ Vanderbilt Assessment Scale: Teacher informant, which was to assess the research question outlined for the survey on the three hallmark symptoms of ADHD namely inattentiveness, hyperactivity and impulsivity together with the respective behavioural disorders associated with each symptom. This study also had a checklist which was in connection with teacher's awareness of these symptoms and the researcher constructed classroom control methods to be adopted by teachers in handling children with ADHD and used it in gathering the information from the participants. The gathered data were analysed, by using percentages. The findings showed the prevalence of all the three types of ADHD in the children, in particular, inattentiveness as most common type of ADHD, which is prevalent in the study area. Results also revealed that since the teachers are unaware of ADHD symptoms among the children, they employed unprofessional classroom behaviour modification approaches such as spanking, blaming and using corporal punishment in order to modify the behaviours of the ADHD children in the classrooms. This study recommended that the primary school teachers should be given training on the behavioural management of ADHD and further they should be given full knowledge on ADHD and suggested that there is a need for effective instructional intervention to handle children with ADHD.

**Key Words** Primary School, ADHD, Behavioural Management, Teachers

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## **INTRODUCTION**

Attention-deficit/hyperactivity disorder (ADHD) is a disorder, which is marked by a pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development (NIH, 2016). Inattention and hyperactivity/impulsivity are the key behaviours of ADHD. Some children with ADHD only have problems with one of the behaviours, while others have both inattention and hyperactivity-impulsivity. Most children have the combined type of ADHD (NIH, 2016).

According to 4<sup>th</sup> Edition of the Diagnostic Statistical Manual of Mental Disorders (DSM-IV) of the American Psychiatric Association (APA), 1994, ADHD children exhibit combinations of the following behaviours: a) Fidgeting with hands or feet or squirming in their seat; b) Difficulty remaining seated when required doing so; c) Difficulty sustaining attention and waiting for a turn in tasks, games, or group situations; d) Blurting out answers to questions before the questions have been completed; e) Finding difficulty in following through on instructions and in organizing tasks; f) Shifting from one unfinished activity to another; g) Failing to give close attention to details and avoiding careless mistakes; h) Losing things necessary for tasks or activities; i) Difficulty in listening to others without being distracted or interrupted; j) Wide ranges in mood swings; and Great difficulty in delaying gratification etc.

Children with ADHD show different combinations of these behaviours that are classified into two main categories namely inattentiveness and hyperactivity-impulsiveness, whereas three subtypes of the disorder have been described in the DSM-IV namely predominantly inattentive, predominantly hyperactive-impulsive, and combined types (Barkley, 1997). For instance, children with ADHD, without hyperactivity and impulsivity, do not show excessive activities or fidgeting but instead may have daydreams, act lethargic or restless, and frequently do not finish their academic work. Not all of these behaviours appear in all situations. A child with ADHD may be able to focus when he/she is receiving frequent reinforcement or very strict control. But the children with hyperactivity-impulsiveness, the symptoms are more frequent and more severe than in other children of the same age.

A child's academic success is often linked with his or her ability to attend to tasks and classroom work cum expectations without much distraction. Such skills enable a student to acquire necessary information, complete assignments and participate in classroom activities and discussions (Forness&Kavale, 2001). But the behaviours associated with ADHD children frequently fail to finish their schoolwork, or they work carelessly. Children with ADHD tend to be more withdrawn and less communicative. They are often impulsive, reacting spontaneously without regard to

previous plans or necessary tasks and homework.

These behaviours of children with ADHD, normally take a lot of time away from class instructions and ultimately leading to class disruptions (US Dept. of Education, 2008). A normal classroom setting requires children to sit still, listen quietly, pay attention and follow the instructions. Children with ADHD find it extremely difficult to do the above-mentioned things not because they are not willing, but because their brain won't let them. When a child exhibits behaviours associated with ADHD, consequences may include; difficulties with academics and with forming relationships with his or her peers if appropriate instructional methodologies and interventions are not implemented. This poses a serious challenge to classroom teachers as it complicates their classroom management and control.

In order to handle the disruptive behaviours of the ADHD children, Classroom management techniques are essential for the teachers. The term also implies the prevention of disruptive behaviour. It is possibly the most difficult aspect of teaching for many teachers; indeed experiencing problems in this area causes some to leave teaching field altogether. Teachers are confronted with a number of complex demands and challenges in their daily work. They are expected to know content and pedagogy, to meet the needs of diverse learners each day, to develop positive personal relationships with each of their students, and to manage classroom situation and behaviour. They are also being asked to keep pace with growing diversity in the classroom and to address the myriad learning needs that diversity generates.

Disruptive behaviours of students with ADHD can be overwhelming to the teachers at times in a traditional classroom setting, as they struggle with the choice of the appropriate classroom management technique to adopt. Students with ADHD usually suffer from getting low grades, receiving scolding and corporal punishment, teasing from peers, and psychological problems such as low self-esteem. The teachers at times, end up feeling offended as they receive complaints from parents and feel that the kids are negligent in following the instructions. This occasionally induces feelings of guilt in teachers because they may feel that they cannot teach the child. This may be eluded only by understanding the characteristics of children with ADHD. This knowledge will be useful in selecting and implementing successful instructional strategies and interventions, which benefit the students with ADHD. Hence the researcher aimed to identify and diagnose ADHD symptoms among the primary school children, aged between 6-11 years.

#### **NEED FOR THE STUDY**

The worldwide prevalence of ADHD varies from less than 1% to over 20%, though a reasonable estimate of prevalence in the US is 4-6%. A clinical profile

carried out in Chandigarh, by Kaur and Chavan (2004), of children attending the Early Intervention Program, showed 12% of Attention Deficit Hyperactivity Disorder (ADHD) out of the 100 children examined. Another study of the ADHD children, in the age group of the 5-12 year, was done in a child guidance clinic in a pediatric hospital, Kolkata by Maya Mukhopadhyay and Misra, (2003) and found out the prevalence of ADHD to be 15.5% and the male to female ratio was 6.4:1. In a larger study by Bhatia et al, (1991) in a pediatric clinic in Delhi examined 1,000 children (aged 3-12 years) and out of 1000 children, 112 were found to have attention deficit disorder with hyperactivity (ADHD). The prevalence of ADHD increased with age from 5.2% in those aged 3-4 years, up to 29.2% in those aged 11-12 years. Epidemiological studies in India indicate that prevalence rates for ADHD vary between 5-10 percent of the general population (Malhi & Singhi, 2000). The incidence is reported to be higher in boys than girls in the ratio of 7:4 (Chawla, Sahasi, Sundaram & Mehta, 1981). However, even though, ADHD is diagnosed and identified in India and worldwide, the available evidence in the state of Andhra Pradesh in India is scarce and insufficient. Hence, there is a need for a study on the identification and diagnosis of ADHD in this region towards implementation of successful instructional strategies and interventions, which benefit the students with ADHD.

#### **PURPOSE OF THE STUDY**

This research investigated ADHD symptoms and behaviours among school children in the age range of 6-11 years or primary school students in and around Vijayawada, Krishna district, Andhra Pradesh, India and the Strategies which were utilised by teachers to handle ADHD children in their classroom.

#### **OBJECTIVES OF THE STUDY**

1. To identify and diagnose Attention Deficit Hyperactivity Disorder (ADHD) and behaviour performance among primary school children in and around Vijayawada, Krishna district, Andhra Pradesh, India.
2. To understand the academic and classroom behavioural performance of primary school children.
3. To find out how primary school teachers in and around Vijayawada, Krishna district, Andhra Pradesh, India manage ADHD in their classrooms.
4. To determine the awareness of teachers about the existence of ADHD among primary school children in and around Vijayawada, Krishna district, Andhra Pradesh, India.

#### **RESEARCH QUESTIONS**

1. What are the symptoms of ADHD among primary school children in and around Vijayawada, Krishna district, Andhra Pradesh?

2. How do primary school children in and around Vijayawada in Krishna district in Andhra Pradesh perform academically and behave in their classroom?
3. Are the primary school teachers in and around Vijayawada in Krishna district in Andhra Pradesh aware of the symptoms of ADHD?
4. How do the primary school teachers in and around Vijayawada in Krishna district in Andhra Pradesh manage children with ADHD in their classroom?

### **METHODOLOGY**

The methodology of the study refers to the plan or design which is carried out to find the answer to the research questions in the study (Creswell, 2009). The methodology of this research study comprises research design, participants of the study, the survey instrument used and the procedure of data collection and data analysis.

### **RESEARCH DESIGN**

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. In fact, it constitutes the blueprint for the collection, measurement and analysis of data (Kothari, 2012). In this study, the researcher utilised survey research method to understand the need for the training of the teachers for the normal ADHD children and the special training for the teachers to deal with the children of hearing impairment.

### **PARTICIPANTS**

As the locale of the research study in Andhra Pradesh, the 584 primary school teachers were selected from Krishna district, using simple random sampling technique from 30 primary schools. Thus the sample for the present study consisted of 584 primary school teachers. The participants comprised of 400 females and 184 males with above 5 years of experience in teaching.

### **SURVEY INSTRUMENT USED**

Data were collected using NICHQ Vanderbilt Assessment Scale: Teacher informant consisting of demographic section, symptoms of Attention Deficit Hyperactivity Disorder (ADHD) and academic and behavioural performance of the children with ADHD. This assessment scale is a four points forced choice Likert type scale, which has 43 items. In the demographic section, the respondents have to mention the child's name, age, grade level, etc. The scale was developed by Mark L Wolraich (1998). The development of Vanderbilt ADHD Assessment Scale was earlier introduced by diagnostic studies and identified the children with ADHD. This assessment scale has three domains or dimensions related to ADHD: Symptoms about ADHD (18 items – inattentiveness, hyperactivity and impulsivity: 17 items – oppositional defiant disorder, anxiety/depression screen: 3 items – academic

performance and 5 items about classroom behavioural performance). The symptoms about ADHD dimension or domain reflects the symptoms of children with inattentiveness, hyperactivity and impulsivity. It is grounded in research documenting the significance or importance of identifying and diagnosing children with ADHD towards improving classroom behavioural management techniques. As such, this dimension or domain attempts to gather information about the children's inattentiveness, hyperactivity and impulsivity. The second dimension, namely academic performance, reflects the academic performance of the children; namely reading, written expression and mathematics and the third dimension reflects the children's behavioural performance: namely relationship with peers, following directions, disrupting class, assignment completion and organizational skills.

To complete the Vanderbilt ADHD Assessment Scale, the respondents or teachers were asked to rate the children's behaviour with each statement by selecting from the following response choices: Never (0), occasionally (1), often (2) and very often (3). The responses were summated to generate a composite score for each domain, with low scores indicating normal behaviour, whereas the higher scores indicated the inattentiveness, hyperactivity and impulsivity among primary school children. The researcher also made a checklist to identify the awareness and behavioural management strategies used by primary school teachers to teach children with ADHD. The respondents were asked to indicate the behavioural management strategies used by them towards teaching the children with abnormal behaviour or ADHD and also to indicate their level of awareness about ADHD. This checklist was validated, by establishing face and content validity and reliability in terms of Cronbach Alpha, which were found to be 0.84.

### **PROCEDURE**

The NICHQ Vanderbilt Assessment Scale and the checklist, developed by the researcher, were administered to 584 primary school teachers in and around Vijayawada, Krishna district in Andhra Pradesh. After getting due permission from the headmasters of primary schools, the researcher visited each primary school for collecting data. Teachers were requested to enter their name, class time, class name, date, child's name, gender in the place provided in the scale. Instructions were also given in the first page of the scale and teachers were requested to follow those instructions, while responding to the items in the scale and checklist. Teachers were further requested and advised not to leave any statements in the scale and checklist. They were also assisted and helped by the researcher to fill the scale and checklist. 584 sets of the scales were distributed to the primary school teachers, selected as mentioned earlier in the sample and sampling procedure. After they were duly filled

by the teachers, these 584 sets of the scales were scored according to the scoring procedure explained in the study. For the analysis and interpretations of the data, the researcher utilized percentages.

## RESULTS

### Research Question: 1

What are the symptoms of ADHD among primary school children in and around Vijayawada, Krishna district in Andhra Pradesh?

**Table 1: Responses to ADHD Symptoms among Primary School Children**

Responses to ADHD Symptoms	No. of Teachers	Percentage
Inattentiveness	296	50.7
Hyperactivity & impulsivity	158	27.0
Hyperactivity, impulsivity & inattentiveness	130	22.3
Total	584	100.0

Form the above table 1, it is inferred that 50.7 % of respondents reported that they have encountered inattentiveness among primary school children in their classroom. 27% of respondents reported that the primary school children or the children in the age range of 6-11 years are hyperactive and impulsive in their character or behaviour and 22.3% of respondents informed that their school children are hyperactive, impulsive and inattentive in the classroom. Hence this analysis revealed that there is an increase in anumber of primary school children with inattentive behaviour in the classrooms of thestudy area.

### Research Question: 2

How do primary school children in and around Vijayawada, Krishna district in Andhra Pradesh perform academically and behave in their classroom?

**Table 2: Responses to ADHD children's Academic and Behaviour Performance**

Responses	Excellent	Above Average	Average	Somewhat problematic	Problematic
Academic Performance	25 (4.3%)	50 (8.6%)	131 (22.4%)	183 (31.3%)	195 (33.4%)
Behaviour Performance	17 (3%)	65 (11.2%)	152 (26%)	120 (20.5%)	230 (39.3%)

From the above table 2, the responses on the academic performance revealed that 33.4% of children with ADHD are problematic, 31.3% of ADHD children are

somewhat problematic, and 22.4% of ADHD children are average, 8.6% of ADHD are above average and only 4.3% of children with ADHD are excellent in their academic performance. This indicates that the disruptive behaviour or hyperactivity-impulsivity and inattentiveness significantly affect the educational achievements.

**Research Question: 3**

Are the primary school teachers in and around Vijayawada, Krishna district in Andhra Pradesh aware of the symptoms of ADHD?

**Table 3: Responses on Awareness about ADHD Symptoms among Teachers**

Responses to Awareness about ADHD Symptoms	No. of Teachers	Percentage
Aware	120	20.6
Unaware	464	79.4
Total	584	100.0

From the above table, it is inferred that 20.6% of teachers reported being aware of ADHD symptoms, whereas 79.4% of teachers were reported to be unaware of ADHD symptoms. Hence the majority of primary school teachers in and around Vijayawada, Krishna district in Andhra Pradesh state are unaware of ADHD symptoms.

**Research Question: 4**

How do the primary school teachers in and around Vijayawada, Krishna district in Andhra Pradesh manage children with ADHD in their classroom?

**Table 4: Responses on Behavioural Management Strategies used by Teachers**



Responses to Behavioural Management Strategies used by Teachers	No. of Teachers	Percentage
Spanking	292	50.0
Criticisms/blame	51	9.0
Rewarding child's behaviour	12	2.00
Ignoring child's misbehaviour	21	3.60
Teasing	10	1.70
Use of abuses	65	11.0
Detentions	11	1.90
Giving clear instructions	15	2.50
Encouragement and use of an after-class chat	70	12.0
Referrals for diagnosis	20	3.40
Expulsions	7	1.20
Other forms of punishment	10	1.70
Total	584	100.0

From the above table, it is inferred that 50.0% of teachers admitted that they are using spanking as a strategy to control the behaviour of ADHD students in their classroom, 12% teachers agreed that they are explaining about ADHD and encouraging to control the behaviour of ADHD students, 11% of teachers abused the ADHD children, 9% of teachers criticised /blamed ADHD children for their disruptive behaviour, and remaining 2% of teachers rewarded child behaviour, other teachers teased ADHD behaviour, referred for diagnosis, ignored child's behaviour in the classroom, provided detentions and other corporal punishment. This indicates that the teachers in the study area utilised negative approaches predominately to handle the children with ADHD.

## DISCUSSION

The findings of this study revealed that 50.7% of participants of the sampled population reported the prevalence of inattentiveness among the children. This may be due to the symptoms of inattentive behaviour in various children that the teachers encountered in the classrooms. Their experience with these children indicated that these children exhibited disruptive behaviours such as not paying attention to details, appearing as if not listening when spoken to, having the trouble of remembering things and staying unorganized, forgetful about things etc. This indicates that this type of inattentiveness is the most common in the study area. This result is not in agreement with the report of American Psychiatric Association which tells that ADHD combined (inattention and Hyperactivity) is the most common type. 27% of participants reported

the prevalence of hyperactivity-impulsivity among the children. The prevalence of the hyperactive-impulsive type of ADHD in the study area implies that some primary school children in the study area show the signs of hyperactivity and impulsiveness in classroom namely constant fidgeting and squirming, talking excessively, being quick-tempered, acting without thinking, saying the wrong thing at the wrong time etc. 22.3% of participants of the sampled population reported the presence or preponderance of inattentiveness, hyperactivity and impulsivity or ADHD combined type among the children. This means that primary school children in the study area exhibited the severe type of ADHD i.e. inattentiveness, hyperactivity and impulsivity. This result is in agreement with the report of American Psychiatric Association (APA), 2001. This finding is not consistent with the several previous studies which have identified a higher prevalence of ADHD among children (Singhi P, Malhi P, 1998)

Approximately 79.4% of teachers in primary schools in around Vijayawada were not aware of ADHD symptoms. This shows that majority of primary school teachers were ignorant of the disorder or not interested to know about the symptoms of ADHD and further it shows that, they lack requisite knowledge of the psychology of human learning. This makes it difficult for them to spot children with ADHD since it is a psychological defect that affects learning. This also indicates that most of the teachers in the study area pay less attention to the learning behaviours and dispositions of the children in the class. They tend to practice direct instruction type of teaching which only aim at filling the students with information without considering whether they understand lesson content or not. This result is in agreement with the studies conducted by Shetty, Anil and Sanjeev, B, (2014).

The findings of this study also indicated that the academic and behavioural performance of the children with ADHD were problematic. This could be due to ineffective instructional strategies/interventions and poor awareness of teachers about ADHD. There must be effective instructional strategies to reinforce the academic and behavioural performance of children with ADHD. This result is in congruence with the study conducted by Irene and Heidi (2006) and also with the study conducted by Lyman, Deshazo & Khinger (2002). This study found that children with ADHD show significant academic underachievement, poor academic performance, and educational problems, which is also evident in the present study findings.

50% of the participants reported the use of spanking as their last option in handling children with disruptive behaviour caused by ADHD in their classroom.

This indicates that most of the primary school teachers in the study area have not been able to come up with a workable or effective instructional strategy for

handling or managing the children with ADHD. Thus the majority of the primary school teachers indicated that spanking is their last alternative option to manage children with ADHD in their classroom. Kessler (2016), a spanking expert indicated that the spanking hurts ADHD children a lot, as they are very sensitive to punishment. 9% of teachers admitted that they do criticize/blame ADHD children, 12% said that they used after-class chat and encouragement, 11% of teachers agreed that they abuse children with ADHD and 18% of the teachers agreed that they use other types of corporal punishments. This indicates that only 23.5% of the teachers in the study area used positive techniques in handling children with ADHD, while 76.5% of teachers used negative techniques. Some of the positive techniques used by teachers include rewarding child's behaviour; ignoring child's misbehaviour; giving clear instruction and use of after-class chat, referrals for diagnosis are ways of motivating the children to learn and also minimizing destructive behaviour in the classroom. This indicates that the teachers should be encouraged and educated on the importance of using positive approaches in handling or managing children with ADHD rather than approaching ADHD children using negative techniques.

### **CONCLUSION**

The findings of this study revealed that inattentiveness, as the type of ADHD, is prevalent more in the study area, while other types of ADHD such as hyperactivity and impulsiveness or Hyperactivity, impulsivity & inattentiveness were less prevalent in the study area. In addition, the academic and behavioural performance of children with ADHD in the study area was problematic. Moreover, the teachers are poorly acquainted with the symptoms of ADHD and utilised negative techniques namely spanking, criticising/blaming, and abusing and detention, etc. to manage or handle children with ADHD. This may further complicate the academic behaviour or performance of ADHD children. Hence this study suggested that the primary school teachers in the study area should be made aware of a seriously disabling condition like ADHD and they should be trained to handle children with ADHD and there is a need for effective instructional interventions to handle the children with Attention Deficit Disorder (ADD).

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