

# Awareness Regarding Attention Deficit Hyperactivity Disorder Among Teachers of Selected Schools in Municipality of Rupandehi

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## Abstract

**Introduction:** Attention Deficit Hyperactivity Disorder (ADHD) is a chronic condition that affects millions of children and often continues into adulthood which includes a combination of persistent problems such as difficulty sustaining attention, hyperactivity and impulsive behavior. The aim of the study was to find out teachers awareness regarding ADHD.

**Material And Method:** Descriptive cross-sectional study was used to find out awareness regarding ADHD among 77 teachers. Three private school were selected using simple random sampling technique, among them seventy seven primary school teachers were selected as a study sample by using enumerative method. Data was collected by pretested self-administered semi-structured questionnaire and the collected data was analyzed by using descriptive and inferential statistics with Statistical Package for Social Sciences (SPSS) Software version 20.

**Results:** Ninety three percent of respondents had awareness that attention deficit hyperactivity disorder (ADHD) vary from person to person, 59.74% of respondents knew child with ADHD has a lower intelligence quotient than normal children. Sixty one percent of respondents had awareness that prolonged emotional disturbances as a risk factor of ADHD, 59.74% of the respondents had awareness that can't sit for long period to pay attention as symptom of ADHD and 64.94% of the respondents had awareness regarding teachers are the effective person for training of ADHD. Majority of the respondents had low awareness (55.84%) regarding ADHD. There was statistically significant association between awareness level regarding attention deficit hyperactivity disorder and years of teaching experience ( $p=0.043$ ).

**Conclusion:** It is concluded that awareness regarding ADHD is inadequate among teachers. Respondents had low awareness regarding management and risk factors of ADHD. Hence concerned authority should focus on organizing awareness programme on ADHD to school teachers.

**Keywords:** Awareness, Attention deficit hyperactivity disorder, School teachers

## INTRODUCTION

Attention Deficit Hyperactivity Disorder (ADHD) is a chronic condition marked by persistent inattention, hyperactivity and sometimes impulsivity. ADHD begins in childhood and often lasts into adulthood.<sup>1</sup> The symptoms of ADHD should present in two or more settings (e.g. at home, school, or work; with friends or relatives; in other activities) and six or more symptoms need to persist to a degree that is inconsistent with developmental level and adversely affect the social, academic or occupational functioning.<sup>2</sup> The guidelines addressed diagnosis and treatment of ADHD in children 6-12 years of age.<sup>3</sup> The exact cause of

attention deficit hyperactivity disorder (ADHD) is not fully understood, although a combination of factors is thought to be responsible such as genetics, brain function and structure, group at risks (who were born prematurely before the 37th week of pregnancy or with a low birth weight, with epilepsy, with brain damage which happened either in the womb or after a severe head injury later in life.<sup>4</sup> ADHD is one of the most common mental disorders affecting children. ADHD also affects many adults. An estimated 5 percent of children and 2.5 percent of adults have ADHD.<sup>5</sup> In Nepal the prevalence of ADHD among school aged children is 11.7%, male constituted 80.5% while females were

19.5%.<sup>6</sup> ADHD is a major problem in school aged children which leads to poor performance in school, low self esteem, troubled relationships and accidents. Boys tend to be more hyperactive and girls tend to be quietly inattentive.<sup>7</sup> A study conducted in India in 2013 shows that among 312 teachers, 268 teachers were aware of the term ADHD and their knowledge of ADHD ranged from poor to adequate. Only 9 percent teachers had a good understanding of ADHD.<sup>8</sup> Children with ADHD need guidance and understanding from teachers to reach their full potential and to succeed. As ADHD can continue to adolescence and adulthood if not diagnosed in school aged children so there is a need for awareness regarding ADHD among school teachers.<sup>9</sup> The study was thus conducted to find out the awareness regarding ADHD among school teachers.

#### **MATERIAL AND METHOD**

Descriptive cross-sectional study design was used to find out the awareness regarding ADHD among 77 school teachers. The study was conducted in selected private schools of Sainamaina municipality, Rupandehi, Province-5 which includes Nava Prabhat English School, Paradise English School and Sungaba Public Secondary School. Among eighteen private schools of Sainamaina municipality three schools was selected by using simple random sampling technique through non replacement lottery method. All primary school teachers of the selected schools were selected by using enumerative method. Pretested Self-administered semi-structured questionnaire (33 questions were included) was prepared by researcher by reviewing related literatures, consulting with the psychiatrist and pediatrician. Data was collected within two weeks of period within 8<sup>th</sup> to 21<sup>th</sup> July 2018. Ethical approval was obtained from Institutional Review Committee Universal College of Medical Sciences. Administrative approval for data collection was obtained from concerned authority of selected schools. Written informed consent was obtained from each respondent by clarifying objectives of the study. Descriptive and inferential statistics with Statistical Package for Social Sciences (SPSS) Software version 20 was used for data analysis.

#### **RESULT**

Regarding socio-demographic variables 48.05% of respondents were of 19-28 years where mean age was 29.77 and standard deviation was 7.298. Twenty two percent were male, 68.83% were brahmin/chhetri, 71.43% had passed bachelor level, 58.44% had teaching experience up to 5 years. Similarly 66.23% of respondents had taken teachers training, 72.73% of respondents had family history of ADHD and 80.52% of respondents had prior experience of child with ADHD. Regarding general information of ADHD, 93.51% of respondents answered ADHD vary from person to person, 31.17% of respondents answered ADHD is associated with neurological impairment, 46.75% of respondents answered ADHD is not associated with mental retardation, 67.53% of respondents answered child with ADHD experience more problems in new situation than in familiar situation and 59.74% of the respondents answered child with ADHD has a lower intelligence quotient than normal children. Likewise 83.12% of the respondents answered developmental disorder whereas 11.69% of the respondent answered neurological disorder as a type of condition of ADHD. Similarly, 77.9% of the respondents answered ADHD is more prevalent in male whereas 38.96% answered 6- 12 years as age group for identification of ADHD (not shown in table).

Regarding meaning of ADHD 49.35% of the respondents answered inappropriate level of inattention, 45.45% answered inappropriate level of hyperactivity whereas 31.17% of the respondents answered inappropriate level of impulsivity. Sixty one percent of the respondents answered prolonged emotional disturbances, 40.26% answered poor parenting and heredity, 18.18% answered problem during pregnancy whereas 5.19% of the respondents answered problem during childbirth as risk factors of ADHD. Regarding symptoms 59.74% of the respondents answered can't sit for long period to pay attention, 46.75% says answering quickly without waiting for the end of the questions, 45.45% answered avoidance of activities that requires sustained attention whereas 40.26% answered talking more as symptoms of ADHD (table 1).

Out of 43 respondents (55.84%) who answered ADHD has treatment 39.53% of the respondents

answered understanding feelings and emotions whereas 2.33% of the respondents answered training and medicine as treatment of ADHD. Likewise 72.73% answered reward for desirable behavior, 62.33% answered providing counselling whereas 1.30% of the respondents answered ignoring for undesirable behaviour as management of ADHD (table 2). Regarding effective person for training of ADHD 76.62% of the respondents answered parents whereas 64.94% of the respondents answered teachers (not shown in table).

**Table 1: Respondent's Awareness Regarding Meaning, Risk Factors, Symptoms of ADHD (n=77)**

Variables	Frequency	Percentage
<b>Meaning**</b>		
Inappropriate level of inattention*	38	49.35
Eating disorder	2	2.60
Inappropriate level of hyperactivity*	35	45.45
Sleeping disorder	3	3.90
Inappropriate level of impulsivity*	24	31.17
<b>Risk Factors**</b>		
Prolonged emotional disturbances*	47	61.00
Poor parenting*	31	40.26
Problem during feeding	3	3.90
Problem during pregnancy*	14	18.18
Hereditiy*	31	40.26
Infection	7	9.09
Malnutrition	6	7.79
Problem during childbirth*	4	5.19
<b>Symptoms**</b>		
Can't sit for long period to pay attention*	46	59.74
Talking more*	31	40.26
Showing abnormal body movement	4	5.19
Poor eating habit	3	3.90
Avoidance of activities that requires sustained attention*	35	45.45
Answering quickly without waiting for the end of the questions*	36	46.75
Lacks in eye contact	8	10.39

**Table 2: Respondent's Awareness Regarding Treatment and Management of ADHD**

Variables	Frequency	Percentage
<b>ADHD has treatment (n= 77)</b>		
Yes*	43	55.84
No	34	44.16
<b>Treatment (43)</b>		
Counseling	15	34.87
Understand feelings and emotions	17	39.53
Proper environment	3	6.98
Love and support	3	6.98
Medicine	1	2.33
Teachers attention	3	6.98
Training	1	2.33
<b>Management (n=77)**</b>		
Providing counseling*	48	62.33
Place the child in crowd	5	6.50
Clear instructions*	34	44.16
Reward for desirable behavior*	56	72.73
Giving warning	1	1.30
Ignoring for undesirable behavior*	1	1.30

**Table 3: Respondent's Awareness Regarding Triggering Factors and Complications of ADHD (n=77)**

Variables	Correct Response	
	Frequency	Percentage
<b>Triggering factors</b>		
Unfamiliar noise	65	84.42
Alteration in temperature	51	66.23
Sparkling light	41	53.25
<b>Complications</b>		
Learning difficulty	68	88.31
Depression	58	75.32
Conduct disorder	60	77.92
Road traffic accident	69	89.61
Falling and slipping	66	85.71
Absenteeism	64	83.12

**Table 4: Respondent's Overall Awareness Level Regarding ADHD (n=77)**

Level of Awareness	Frequency	Percentage
High (above mean score)	34	44.2
Low(below mean score)	43	55.8

Mean Score=14.77 ; Total score=24

**Table 5: Association between Respondent's Awareness Level Regarding ADHD and Socio-demographic Variables (n=77)**

Variables	Level of awareness		$\chi^2$	p-value
	High n(%)	Low n(%)		
<b>Age in years</b>				
19-28	16(20.77)	21(27.27)	3.604	0.308
29-38	12(15.58)	18(23.38)		
39-48	4(5.19)	4(5.19)		
49-58	2(2.60)	0(0)		
<b>Sex</b>				
Male	9(11.69)	8(10.39)	0.683	0.409
Female	25(32.47)	35(45.45)		
<b>Training of teachers</b>				
Yes	20(25.97)	31(40.26)	1.495	0.221
No	14(18.18)	12(15.58)		
<b>Years of teaching experience</b>				
≤ 5 years	16(20.78)	29(37.66)	3.604	0.043*
6-10 years	12(15.58)	5(6.49)		
Above 10 years	6(7.79)	9(11.69)		
<b>Level of education</b>				
Secondary level	2(2.60)	0(0)	3.398	0.183
Higher Secondary level	9(11.68)	11(14.29)		
Bachelor level	23(29.87)	32(41.56)		
<b>Family history</b>				
Yes	12(15.58)	9(11.68)	1.9755	0.160
No	22(28.57)	34(44.16)		

Regarding awareness regarding triggering factors 84.4% answered noise and 53.2% answered sparkling light as triggering factor of ADHD. Similarly, 89.61% answered road traffic accident whereas 75.32% answered depression as complication of ADHD (table 3). Likewise, 20.78% of the respondents answered there is maximum prognosis of ADHD (not shown in table). More than half (55.8%) of the respondents had low awareness regarding ADHD (table 4). There is statistically significant association between respondents' level of awareness and years of teaching experience (  $p=0.043$  ) (table 5).

**DISCUSSION:**

Descriptive study was used to find out the awareness regarding ADHD among teachers of selected schools in municipality of Rupandehi. The findings of the study showed 77.92% of the respondents were aware that ADHD is more prevalent in male than in female which is higher than the study <sup>10</sup> conducted in Caribbean nation which showed only 41.4 % of the respondents were aware that ADHD is more prevalent in male than in female.

The study showed 40.26% of the respondents were aware that heredity and poor parenting as risk factor of ADHD which are inconsistent with the study <sup>10</sup> conducted in Caribbean nation by which showed 33.2 % and 72.8% were aware that heredity and poor parenting as risk factor of ADHD respectively.

The study revealed 59.74% of the respondents were aware of symptom of ADHD who answered can't sit for long period to pay attention which is higher than the study<sup>10</sup> conducted in Caribbean nation which revealed that only 23.1% of the respondents were aware of symptoms of ADHD who answered can't sit for long period to pay attention.

The study highlighted 40.26%, 45.45% and 46.75% of the respondents were aware that talking more, avoidance of activities that requires sustained attention and answering quickly without waiting for the end of the question as a symptom of ADHD which are inconsistent with the study<sup>8</sup> conducted in India which reveals 61%, 65% and 36% of the respondents were aware that talking more, avoidance of activities that requires sustained attention and answering quickly without

waiting for the end of the question as a symptom of ADHD respectively.

The findings of the study showed 55.84% of the respondents answered child with ADHD has treatment which is higher than the study<sup>11</sup> conducted in Sri Lanka which showed that 46.5% of the respondents were aware that ADHD has treatment. The findings of the study showed 62.33% of the respondents were aware that providing counseling is management of ADHD which is lower than the study<sup>11</sup> conducted in Sri Lanka which shows 74.2% of the respondent were aware that providing counseling is management of ADHD.

The finding of the study showed 72.73% and 1.3% of the respondent were aware that reward for desirable behaviour and ignoring for undesirable behavior is management of ADHD which are lower than the study conducted in South Africa<sup>12</sup> which shows 86.9% and 66.7% of the respondent were aware that reward for desirable behavior and ignoring for undesirable behavior is management of ADHD.

This study showed that there was no statistically significant association between respondent's level of awareness regarding ADHD and age in years ( $p=0.308$ ). This findings is different than the study<sup>13</sup> conducted in Pakistan which shows respondent's level of awareness regarding ADHD and age in years are significantly associated ( $p < 0.001$ ). Our study showed that there was no statistically significant association between respondent's level of awareness regarding ADHD and sex ( $p=0.409$ ). This finding is similar to the study<sup>13</sup> conducted in Pakistan which shows respondent's level of awareness regarding ADHD and sex has no significant association ( $p= 0.698$ ).

#### CONCLUSION:

On the basis of findings of this study, it is concluded that more than half of the teachers have overall low awareness regarding ADHD. Less than three fifth of the teachers have awareness regarding general concept of ADHD. More than two fifth of the teachers have awareness regarding meaning of ADHD as inappropriate level of inattention, hyperactivity and impulsivity. Likewise nearly half of the teachers have awareness about the type of condition and symptoms of ADHD. More than

one third of the teachers have awareness regarding risk factors and management of ADHD. Similarly more than half of the teachers have awareness regarding triggering factors and effective person for training of ADHD. On the other hand there is statistically significant association between teachers' overall level of awareness regarding ADHD and years of teaching experience whereas there is no statistically significant association between teachers' overall level of awareness regarding ADHD age, sex, training of teachers, level of education and family history.

Teacher's knowledge regarding ADHD is inadequate. So it is recommended that concerned authority of schools of Sainamaina municipality of Rupandehi should conduct awareness programme regarding ADHD among school teachers.

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