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KNOWLEDGE OF ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) AMONG PRIMARY SCHOOL TEACHERS OF A RURAL BLOCK OF HARYANA

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ABSTRACT

Attention deficit hyperkinetic disorder (ADHD) is a behavioral and neurocognitive condition characterized by developmentally inappropriate and impairing levels of gross motor overactivity, inattention, and impulsivity. The objective of the current study is to know the knowledge of primary school teachers towards such children attending the primary schools. It was a cross sectional study carried out among 146 primary school teachers. Only 13.7% of study teachers were having knowledge about any mental health problem among students studying in primary schools. This kind of knowledge was more (21.4%) among male study teachers. Senior secondary qualified (33.3%) teachers were more knowledgeable than graduate (12.5%) and postgraduate (8.7%) teachers regarding this aspect. Almost negligible (1.4%) of the study teachers had ever heard about ADHD. The knowledge of the primary school teachers regarding ADHD is very poor and need to be improved.

Key Words: *Knowledge, ADHD, Teachers*

INTRODUCTION

Attention deficit hyperkinetic disorder (ADHD) is a behavioral and neurocognitive condition characterized by developmentally inappropriate and impairing levels of gross motor overactivity, inattention, and impulsivity. The essential feature of ADHD is a persistent pattern of inattention and/or hyperactivity – impulsivity that is more frequent and severe than is typically observed in individuals at a comparable level of development. The affected child will manifest persistent patterns of ADHD behaviors that are more frequent and severe, unlike an unaffected child who may exhibit similar behaviors only at times (Saddock and Saddock, 2009).

The problem of ADHD is very important from public health point of view, as these children are likely to develop numerous problems including poor academic performance, learning disorders, poor social adjustment, increased risk of substance abuse, increased risk for accidents, conduct disorders, anxiety and mood disorders. So to know the knowledge of primary school teachers towards such children attending the primary schools is an issue of prime importance for helping and providing timely care to these children. This handicap should not become an obstacle for their overall growth and development which otherwise may pass on to the adult life.

Hence social awareness particularly among the stakeholders like school teachers can play pivotal role in largely combating the handicap associated with ADHD. With this background in mind, the present study has been conceived.

MATERIALS AND METHODS

The study was carried out in the rural block Beri, district Jhajjar (Haryana) which is the field practice area attached to Department of Community Medicine, Pt. B. D. Sharma Post Graduate Institute of Medical Sciences Rohtak. Block headquarter Beri is situated at a distance of 30 km from PGIMS Rohtak. This block has a population of 157,604 as on 31st March, 2011.

The primary school teachers of block Beri were taken as study subjects, as per study criteria.

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Study Design

It was a cross sectional study.

Data Collection, Compilation and Analysis

The data on knowledge, attitude, and behaviour of teachers towards children having ADHD was collected by administering, pre-tested, semi-structured schedule. The confidentiality of the data was maintained.

The data so collected was compiled and subjected to appropriate statistical tests wherever applicable and interpretations made accordingly.

RESULTS AND DISCUSSION

In the present study for the purpose of assessing knowledge of teachers towards children with ADHD, 146 primary school teachers who were available and willing to participate in the study were selected for the study. Data were collected using predesigned, pretested, semistructured schedule by the investigator himself by interview technique. The findings were as follows:-

Table 1: School-wise distribution of study teachers

School	Number of teachers	Percent
Govt.	80	54.8
Private	66	45.2
Total	146	100.0

In the present study 80 (54.8%) of the study teachers belonged to govt. schools and 66 (45.2%) were from private schools.

Table 2: Age-wise distribution of study teachers

Age group (years) of teachers	Number of teachers	Percent
22-29	28	19.2
30-39	42	28.8
40-49	28	19.2
50-57	48	32.9
Total	146	100.0

Mean age of teachers = 40.82 ± 10.882 (Range= 22 to 57 years)

Maximum teachers (32.9%) were in the age group of 50-57 years followed by 30-39 years (28.8%). Mean age of the teachers was 40.82 ± 10.882 years ranging from 22 to 57 years.

Table 3: Gender-wise distribution of study teachers

Gender of teacher	Number of teachers	Percent
Male	28	19.2
Female	118	80.8
Total	146	100.0

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This table depicts that majority of the study teachers (80.8%) were female while only 19.2% of study teachers were male.

Table 4: Distribution of study teachers as per their qualification

Qualification of teacher	Number of teachers	Percent
High school	38	26.0
Senior secondary	30	20.5
Graduate	32	21.9
Post graduate	46	31.5
Total	146	100

Above table showed that 31.5% of the study teachers were post-graduates followed by high school (26.0%), graduate (21.9%) and senior secondary (20.5%) qualified teachers.

Table 5: Distribution of study teachers according to their teaching experience

Experience of teaching	Number of teachers	Percent
≤ 10 years	52	35.6
> 10 years	94	64.4
Total	146	100.0

Mean experience of teaching (years) = 14.62 ± 9.606 (Range = 1 to 35 years)

This table showed that 94 (64.4%) teachers were having teaching experience of >10 years while about one third (35.6%) of teachers were having ≤ 10 years of teaching experience. Mean experience of teaching was 14.62 ± 9.606 years ranging from 1 to 35 years.

The below table revealed that only 13.7% of study teachers (17.5% of govt. and 9.1% of private) were having knowledge about any mental health problem among students studying in primary schools.

This kind of knowledge was more among males (21.4%) as compared to female (11.9%) study teachers. Knowledge was more among teachers of 22-29 and 40-49 years (21.4% in each) as compared to other age groups.

Surprisingly, senior secondary qualified (33.3%) teachers were more knowledgeable than graduate (12.5%) and postgraduate (8.7%) teachers regarding this aspect, might be because of their long experience working with these children.

Knowledge of any mental health problem in children was more (17.0%) among teachers having experience > 10 years while it was only 7.7% in teachers with experience ≤ 10 years.

Difference regarding this knowledge among various age groups and educational qualifications of study teachers as shown above was found to be statistically significant ($p < 0.05$).

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Table 6: Knowledge of study teachers about any mental health problem in children (n=146)

Distribution of study teachers	Having knowledge	Having no knowledge	no χ^2 ; df	p-Value
Total (n=146)	20 (13.7)	126 (86.3)		
School-wise				
Govt. (n=80)	14 (17.5)	66 (82.5)	2.163; 1	0.141
Private (n=66)	6 (9.1)	60 (90.9)		
Gender-wise				
Male (n=28)	6 (21.4)	22 (78.6)	1.751; 1	0.186
Female (n=118)	14 (11.9)	104 (88.1)		
Age group-wise				
22-29 (n=28)	6 (21.4)	22 (78.6)	9.855; 3	0.020*
30-39 (n=42)	0 (0.0)	42 (100.0)		
40-49 (n=28)	6 (21.4)	22 (78.6)		
50-57 (n=48)	8 (16.7)	40 (83.3)		
Qualification-wise				
High school (n=38)	2 (5.3)	36 (94.7)	13.083; 3	0.004*
Senior secondary (n=30)	10 (33.3)	20 (66.7)		
Graduate (n=32)	4 (12.5)	28 (87.5)		
Post graduate (n=46)	4 (8.7)	42 (91.3)		
Teaching experience-wise				
≤ 10 years (n=52)	4 (7.7)	48 (92.3)	2.465; 1	0.116
> 10 years (n=94)	16 (17.0)	78 (83.0)		

Figures in parentheses are percentages. *difference is statistically significant.

Table 7: Distribution of study teachers who have ever heard about ADHD

Heard about ADHD	Number of teachers	Percent
Yes	2	1.4
No	144	98.6
Total	146	100.0

It was very surprising finding that almost negligible i.e. 2 (1.4%) of the study teachers had ever heard about ADHD who were in intimate contact with the study students.

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As per the above observation, 98.6% of the study teachers had not ever heard about the ADHD. Probably no one had informed them and they might not have got any opportunity to know about this mental health problem of children. On further discussion, the investigator himself explained to them the signs, symptoms and other salient features regarding ADHD among children.

Discussion

Knowledge and attitude of teachers towards children with ADHD play pivotal role in their desired behavior towards such students. Very few studies had been conducted among primary school teachers to know their knowledge, attitude and behaviour towards children with ADHD. Not even one study was available which had been carried out in India regarding the above mentioned subject to the best of our knowledge.

One hundred and forty six primary school teachers (80 govt. and 66 private) who were available and willing to participate in the study after obtaining verbal informed consent were selected for the present study. The knowledge, attitude and behaviour of these 146 primary school teachers was assessed using predesigned, pretested, semistructured schedule by interview technique by the investigator himself. Maximum teachers (32.9%) were in the age-group 50-57 years followed by in age group of 30-39 years (28.8%). Mean age of the teachers was 40.82 ± 10.882 years ranging from 22 to 57 years. Majority of the teachers (80.8%) were females (Table 1, 2 and 3).

In our study 31.5% of the teachers were qualified up to post-graduate followed by graduation (21.9%) and high school (20.5%) level. Mean experience of teaching was 14.62 ± 9.606 years which ranged from 1 to 35 years (Table 4 and 5).

It was found that knowledge among teachers about any mental health problem of children was only 13.7% (17.5% among govt. and 9.1% among private school teachers). Rodrigo *et al.*, (2011) assessed the knowledge and attitudes towards ADHD among primary school teachers in the Gampaha District, Sri Lanka and found that only a minority had adequate knowledge about the presentation of ADHD.⁵³ Ghanizadeh *et al.*, (2006) also reveals lower knowledge about ADHD among 196 elementary school teachers in Shiraz, Iran (Ghanizadeh and Bahredar, 2006).

However, Jarque Fernández *et al.*, (2007) analyzed the knowledge, misconceptions, and lacks about ADHD in a sample of 193 teachers and indicated an average of 63.88% correct responses regarding knowledge about ADHD symptoms and diagnosis (Jarque Fernández *et al.*, 2007). Shetty (2006) also demonstrated fair to good knowledge of ADHD (89.5 %) among teachers with regards to children with behavioral problems using cluster sampling method in randomly selected 20 primary and secondary level schools located in the South-Eastern Health Region of Jamaica (Shetty, 2006). Similarly Brook *et al.*, (2000) estimated teachers' general knowledge about ADHD (71%). The difference in level of teachers' knowledge regarding ADHD may be due to different geographical area, different methods of selecting the samples, different sample populations and different educational qualification of teachers which might have led to different perception of teachers regarding ADHD.

Teachers dealing with the students of poor socio-economic background in rural areas had little opportunity to gain insight about such mental health problem of children. They remained busy in insuring the attendance of such children in schools and struggling with providing very elementary education. So the knowledge of the teachers selected for the study regarding ADHD was very poor.

It was observed that male teachers were more knowledgeable (21.4%) than the female teachers (11.9%) about any mental health problem of children. This might be because male teachers were more socially active than the females moreover females remained busy in taking care of the household activities and looking after their children in the family thus finding very less time to gain knowledge about such problems.

Knowledge was more among teachers in the age group of 22-29 and 40-49 years (6 out of 28 i.e. 21.4% in each age group) as compared to other age groups. Surprisingly senior secondary qualified teachers were more knowledgeable (10 out of 30 i.e. 33.3%) than graduate (4 out of 32 i.e. 12.5%) and postgraduate (4

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out of 46 i.e. 8.7%) qualified teachers. Knowledge of mental health was more among teachers having experience > 10 years (16 out of 94 i.e. 17.0%).

Overall, only 13.7% of teachers were having knowledge about any mental health disorder of children. Out of 146 teachers interviewed, only 2 (1.4%) female teachers working in govt. schools replied that they have ever heard about ADHD and this too was because they had been trained at SIRTAR (State Institute for Rehabilitation, Training and Research)- Rohtak Haryana, an Institute for mentally handicapped children.

In the present study about two third (68.5%) study teachers (67.5% of govt. and 69.7% of private schools) were having the opinion that children with ADHD should be taught in regular schools. The study also revealed that 78.6% male and 66.1% female teachers were having similar opinion. Ranging from 62.5 - 78.6% teachers of different age groups from 22 to 57 years were in favour for regular schooling of children with ADHD. Surprisingly senior secondary qualified teachers (26 out of 30 i.e. 86.7%) were more in favor of children with ADHD being taught in regular schools as compared to graduate (22 out of 32 i.e. 68.8%) and postgraduate (46 out of 32 i.e. 69.6%) qualified teachers. This might be because of the long experience of senior secondary qualified teachers in observing such children.

In our study about one third (34.2%; 25% of govt. and 45.5% of private) school teachers were of the opinion that managing children with ADHD was easy. The study also found that notably higher percentage of male teachers (50%) than female teachers (30.5%) were of the opinion that children with ADHD can be easily managed. This opinion was maximum (12 out of 28 i.e. 42.9%) among the teachers of age group 40-49 years while it was minimum in teachers of age group 22-29 years (6 out of 28 i.e. 21.4%) as compared to teachers of other age groups. The same opinion did not vary much (31.2%-39.1%) among teachers of different qualifications. This opinion of managing children with ADHD easily was more among teachers who had < 10 years of experience (42.3%) as compared to teachers with experience of >10 years (29.8%).

Toros determined that most of the teachers felt that information about ADHD should be given to them (Toros, 2003). Jerome *et al.*, (1994) compared American and Canadian teachers' knowledge and attitudes regarding ADHD. He observed that most teachers regarded ADHD as a valid diagnosis with educational implications and wanted more formal training (Jerome and Gordon, 1994). Similarly, in our study majority (89%) of the school teachers (85% of govt. and 93.9% of private) were having opinion that they should be sensitized about ADHD. Also, all the male teachers and 86.4% of female teachers were having similar opinion. This opinion did not vary much among teachers of different age groups, qualifications and experiences.

In the present study about three fourth (74.1%) of school teachers were of the opinion that children with ADHD should be handled with love while 28.8% were in favour of referring them to doctor. Surprisingly, 24.7% of teachers were of opinion that children with ADHD should be punished.

It was found that about three fourth (76.7%) of teachers were of the opinion that community should handle the children with ADHD with love whereas 11% believed that behaviour of the community towards these children should be as with other normal children. Likewise, in a study by Ghanizadeh *et al.*, (2006) researchers determined that 64.8% teachers agreed that the disciplinary rules used for all students should also be applied to ADHD children (Ghanizadeh and Bahredar, 2006). Brook *et al.*, (2000) also found that almost 40% teachers considered ADHD children should be rebuked and/or punished in a manner similar to non-ADHD kids (Brook and Watemberg, 2000). In our study majority (80.8%) of the teachers expressed that children with ADHD should be taught the same lesson again and again while 9.6% of school teachers punished such children if required.

Only 11% (2 out of 80 i.e. 2.5% of govt. and 14 out of 66 i.e. 21.2% of private) school teachers have referred children with ADHD like symptoms to some health facility. The present study also found that none of the male teacher and only 13.6% female teachers referred such children to any of the health facility. Similar behaviour was exhibited by 26.1% (12 out of 46) of postgraduate teachers, 21.4% (6 out of 28) of teachers of age group 22-29 years and 23.1% (12 out of 52) of teachers having teaching

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experience < 10 years. This might be because young teachers were more aware and more concerned towards children having ADHD like symptoms.

The knowledge of the primary school teachers regarding ADHD is very poor and need to be improved. Particular focus should be on disseminating the message that timely interventions can make the difference in the educational and social development of the child. The primary school teachers should be imparted training about ADHD by organizing workshops. This will also help in early identification and timely referral of children with ADHD to the appropriate health facility.

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