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# A descriptive study to assess the knowledge of primary school teachers about the attention deficit hyperactivity disorder in association of demographic variables at the selected schools of District Sri Muktsar Sahib, Punjab 

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#### Abstract

Introduction: Attention Deficit Hyperactivity Disorder (ADHD) is one of the most common mental disorders that develop in children and becomes apparent in the pre-school and early school years. ADHD is becoming a serious public health problem affecting a large number of children and adults. Generally, in developing countries $15-20 \%$ of students who are not able to maintain satisfactory collateral progress and lack of ability to successfully navigate the educational system cause serious problems for their parents. A child's academic success is often dependent on his or her ability to attend to tasks, and to teacher to fulfill classroom expectation with minimal distraction. Such skills enables a child to study well. This study helps to evaluate the knowledge regarding ADHD in children among primary school teachers in association of demographic variables in district Sri Muktsar Sahib, Punjab.

\section*{Aim of the study} 1) To Associate the knowledge of primary school teacher with selected demographic variables.

Material and Methods: A non-experimental descriptive study was conducted on 40 teachers teaching in selected school of Punjab. Data was collected through structured questionnaire. Results: Fifty five percent primary school teachers in district Sri Muktsar Sahib, Punjab showed moderate level of knowledge about ADHD in which $87.5 \%$ female teachers belonged from urban area and nuclear families, (57.5\%) were graduates. The most important source of their ADHD knowledge has been the media ( $35 \%$ ), curriculum ( $30 \%$ ) and Internet ( $30 \%$ ). Age wise teachers were between 2235 years. With 1-9 years of teaching experience. Monthly income ranged between Rs 6000-20,000/-, and $83 \%$ of teachers were married. Statistical analysis has demonstrated that there was no significance relation found between association of the level of knowledge scores and other socio-demographic variables except monthly income variable were showing the chi square value (17.48), degree of freedom (6) at 0.008 level of significance because other sociodemographic variables has been showing the calculated chi-square values are less than the table value at the 0.05 level of significance. Conclusion: From the results it may be concluded that the primary school teachers has moderate knowledge of ADHD and their source of knowledge has been media, curriculum and Internet. Since, there was no significance relation found between association of the level of knowledge scores and other socio-demographic variables To increase the awareness about ADHD in schools will need to start reasonable educational events by collaborating with hospital, medical colleges and nursing collages through onsite events, social media and internet.


Keywords: Primary school teachers, Attention Deficit Hyperactivity, Hyperactivity (ADHD\} Demographic variables

## Introduction

Every children as young as 2 years old have the cognitive capacity to interpret the physical and psychological states of others, the emotional capacity to affectively experience the other state, and the behavior repertoire that permits the possibility of trying to alleviate discomfort in others. A child of three or four is considered a preschooler and they are different from toddlers. They are developing the basic life skills, independence and knowledge that they will need as they enter their school years.

Preschoolers learn many new skills and stretching their cognitive abilities. These are the capabilities underlie each and every children. When children do not act in a way consistent with these capacities, we might therefore, come to a very different conclusion that they have some psychological problems. Now days, Attention Deficit Hyperactivity (ADHD) is one of the most common mental disorders that develop in children and becomes apparent in the preschool and early school years. The global burden of disease indicated that by the year 2020, childhood neuropsychiatric disorders will increase by more than $50 \%$ internationally to become one of the five most common causes of morbidity and disability among children. Attention Deficit Hyperactivity disorder is becoming a serious public health problem affecting a large number of children and adults. It is persistent and debilitating in attention, over activity and impulsivity. The variable incidence of Attention Deficit Hyperactivity disorder, ranging from 2\% to $16 \%$ and Attention Deficit Hyperactivity disorder is diagnosed much more often in boys than in girls. It is very important to know more about Attention Deficit Hyperactivity disorder because it can have a significant social impact on person's live, causing disruption at school, work or home and in relationships ${ }^{[1]}$.
Today's Children are tomorrow's citizens of the world. There is a great to emphasize on children these days because of that a very substantial proportion of the world's population, $35-45 \%$ constitutes young children. The future of our country depends on positive mental health of our young people ${ }^{[2]}$.
Childhood and adolescent psychiatric disorder remain prevalent around the globe with prevalence estimates of around $12 \%$. An understanding of the mental and emotional development of children is essentiall ${ }^{[3]}$.
Education is one of the most important aspects of human resource development. The inability to successfully navigate the educational system can cause serious problems for children and their parents. There are many reasons for children to underperform at school such as, medical problems, below average intelligence, specific learning disability, and attention deficit hyperactivity disorder (ADHD), emotional problems, psychiatric problems, poor home environment etc. ${ }^{[4]}$
A child's academic success is often dependent on his or her ability to attend to tasks, and to teacher and to fulfill
classroom expectation with minimal distraction. Such skill enables a child to study well ${ }^{[5]}$.

## Need of the study

The apparent lack of knowledge regarding attention deficit hyperactivity disorder and effective interventions among main stream classroom teachers it is important to further study teacher knowledge assessment related to children with attention deficit hyperactivity disorder.

## Aim and Objectives

The aim of the study is to associate the knowledge of primary school teachers about Attention Deficit Hyperactivity Disorder with demographic variables in selected schools of district Sri Muktsar Sahib, Punjab.

## Material and Methods

The setting for the present study was conducted in Government Primary Schools of District Sri Muktsar Sahib, Punjab. Selected by convenience sampling technique.

1. Dashmesh Public School, Badal Sri Muktsar Sahib
2. SanatanDharam Senior Secondary School, Malouts
3. Guru Teg Bahadur Public Senior Secondary School, Malout

## Target population

The target population was teachers of selected primary schools of District Sri Muktsar Sahib, Punjab.

## Sample size and sampling technique

The sample size for the study was 40 teachers of selected schools of Sri Muktsar Sahib, Punjab. Non-probability convenient sampling technique was used to select the samples.

## Sample inclusion criteria

1. School teachers who were willing to participate in the study
2. School teachers who were present during the data collection

## Exclusion criteria can't understand English

Tools used for data collection Self-structured Questionnaire's.


Fig 1: Flow Chart of Research design

Results: The pilot study conducted in the primary schools revealed the the feasibility and the practicability of the
research tool. The data was collected by the structured knowledge questionnaire and was analyzed and interpreted
according to the objectives. Descriptive statistics used were frequency percentage, mean, standard deviation. Further, inferential statistics like (' $t$ ' \& ' $X^{2}$ ') tests were used for association of knowledge of primary school teachers with demographic variables at 0.05 level of significance. The results found are presented in the form of tables and graphs
and interpreted for research report. The demographic variables were described in terms of age, gender, religion, place of residence, Education status, monthly income, marital status, type of family, job experiences and previous information, etc.

Table 1: Frequency and percentage distribution of primary school of teachers to socio demographic variables $\mathrm{N}=40$

| Demographic Variables |  | Frequency (f) | Percentage (\%) |
| :---: | :---: | :---: | :---: |
| 1. Age in years | 22-25 years | 4 | 10.0\% |
|  | 26-30 years | 16 | 40.0\% |
|  | 31-35 years | 20 | 50.0\% |
| 2. Gender | Male | 5 | 12.5\% |
|  | Female | 35 | 87.5\% |
| 3. Religion | Hindu | 20 | 50.0\% |
|  | Christian | 0 | 0.0\% |
|  | Muslims | 0 | 0.0\% |
|  | Sikh | 20 | 50.0\% |
| 4. Educational Status | Diploma | 3 | 7.5\% |
|  | Degree | 20 | 50.0\% |
|  | Master's Degree | 17 | 42.5\% |
|  | Any other | 0 | 0.0\% |
| 5. Monthly Income | Rs 6000-10000 | 7 | 17.5\% |
|  | Rs 10001-15000 | 13 | 32.5\% |
|  | Rs 15001-20000 | 9 | 22.5\% |
|  | Above Rs 20000 | 11 | 27.5\% |
| 6. Marital Status | Single | 7 | 17.5\% |
|  | Married | 33 | 82.5\% |
|  | Divorced | 0 | 0.0\% |
|  | Separated | 0 | 0.0\% |
| 7. Residential area | Rural | 17 | 42.5\% |
|  | Urban | 23 | 57.5\% |
| 8. Type of Family | Nuclear | 27 | 67.5\% |
|  | Joint | 11 | 27.5\% |
|  | Extended | 2 | 5\% |
| 9. Any History of Attention Deficit | Yes | 5 | 12.5\% |
|  | No | 35 | 87.5\% |
| 10. Years of Experience in handling Primary Children | 1-3 years | 9 | 22.5\% |
|  | 4-6 years | 22 | 55\% |
|  | 7-9 years | 8 | 20\% |
|  | Above 9 years | 1 | 2.5\% |
| 11. Previous Information | 1-3 years | 25 | 62.5\% |
|  | $4-6$ years | 15 | 37.5\% |
|  | 7-9 years | 0 | 0.0\% |
|  | Above 9 years | 0 | 0.0\% |
| 12. Sources of information | Media | 14 | 35.0\% |
|  | Curriculum | 12 | 30.0\% |
|  | Through Family | 2 | 5.0\% |
|  | Internet | 12 | 30.0\% |

From the above Table-1 it was observed that in primary school of teachers of selected district Sri Muktsar Sahib, Punjab, out of 40 teachers, Maximum 20 teachers (50\%) were in the age group of $31-35$ years, $16(40 \%)$ were in the age 26-30 years and Minimum 4 ( $10 \%$ ) were in the age group of 22-25 years.
Gender wise 35(87.5\%) were Females and 5 (12.5\%) were Males. Fifty percent were Hindus and $50 \%$ Sikhs. There were no Christians or Muslim teachers.
According to Educational Status, Maximum 20 (50\%) were from degree, 17 ( $42.5 \%$ ) were from master's degree, 3 (7.5\%) were from diploma and minimum 0 from others. As per their financial status monthly income, 13 (32.5\%) were in the slab of Rs. 10000-15000, 11 (27.5\%) were in the slab of above Rs. 20000, 9 ( $22.5 \%$ ) were in the slab of of Rs.
$15000-20000$, and 7 (17.5\%) were drawing Rs. 600010000 per month. Maximum 33 ( $82.5 \%$ ) teachers were married, 7 ( $17.5 \%$ ) were single.
Maximum of teachers came from Urban area 23 (57.5\%) were from urban while 17 ( $42.5 \%$ ) were from rural area. Maximum 27 ( $67.5 \%$ ) were belonged to nuclear family, $11(27.5 \%)$ were joint family and 2 (5\%) were belonged from extended family.
As per the knowledge of Attention Deficit, Maximum 35 (87.5\%) teachers did not know about ADHD and only 5 (12.5\%) knew about ADHD.

According to experience in handling Primary Children years, Maximum 22 (55\%) teachers were having 4-6 year experience, 9 ( $22.5 \%$ ) having 1-3 year experience, 8 ( $20 \%$ ) having 7-9 year experience and minimum 1 ( $2.5 \%$ ) having
above 9 year experience. Their source of information about ADHD Maximum 14 (35\%) teachers got information from media, $12(30 \%)$ learnt from curriculum \& internet. Separately while 2 (5\%) received information through family.


Fig 2: Pie chart showing the percentage distribution of teachers according to age group


Fig 3: Pie chart showing the percentage distribution of teachers according to gender


Fig 4: Pie chart showing the percentage distribution of teachers according to religion


Fig 5: Bar chart showing the percentage distribution of teachers according to Educational Status


Fig 6: Bar chart showing the percentage distribution of according monthly income


Fig 7: Bar chart showing the percentage distribution of teachers according to marital status


Fig 8: Pie chart showing the percentage distribution of teachers according to residential area


Fig 9: Pie chart showing the percentage distribution of according to type of family


Fig 10: Pie chart showing the percentage distribution of teachers according to any history of ADHD


Fig 11: Pyramid bar chart showing the percentage distribution of teachers according to years of experience in handling primary children


Fig 12: Pie chart showing the percentage distribution of according to previous information


Fig 13: Bar chart showing the percentage distribution of teachers according to sources of information

Consist of structured knowledge questionnaires to assess the level of knowledge of teacher regarding ADHD
This section describes the level of knowledge school teachers regarding Attention Deficit Hyperactivity Disorders
of selected primary schools of district Sri Muktsar Sahib, Punjab. In Figure 14 were showing individual scores of 40 teacher's which help in calculating the percentage, mean, median, S.D and Mean\%.


Fig 14: Line diagram showing Individual Scores

Table 2: Criteria Measure of levels of Knowledge Score

| Levels of scores (N= 40) | Frequency | Percentage |
| :---: | :---: | :---: |
| Adequate Knowledge (19-26) | 4 | $10 \%$ |
| Moderate Knowledge (10-18) | 22 | $55 \%$ |
| Inadequate Knowledge (0-9) | 14 | $35 \%$ |

Maximum $=26$, Minimum=0


Fig 15: Bar diagram showing Level of Knowledge Score

Table2 and Fig 15. Showing the Level of Knowledge score regarding the ADHD, 22 out of 40 teachers having moderate knowledge (55\%), 14 (35\%) having inadequate and 4 (10\%) teachers having adequate knowledge.

Table 3: Mean, Median, S.D. and Mean\% of Level of Knowledge Score

| Statistics | Mean | Median | S.D. | Maximum | Minimum | Range | Mean <br> $\boldsymbol{\%}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Values | 11.88 | 11.5 | 4.38 | 23 | 5 | 18 | 45.67 |

The data represented in Table 3 indicates that the overall mean, median, S.D. and mean\% of primary schools is $11.88,11.5,4.38$ and 45.67 respectively.
4.3 Chi square Relation of Association of Knowledge Score and Demographic Variables

This section deals with the chi square test relation between the association with level of knowledge score and selected
socio-demographic variables.

Table 4: Showing Chi-square relationship of Association of Knowledge Scores and Demographic Variables

| Demographic Variables | Levels of Knowledge ( $\mathrm{N}=40$ ) |  |  | Association with Knowledge Score |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | AK | MK | IK | Chi-Tes | DF | P Value | Table value | Result |
| 1. Age in years |  |  |  |  |  |  |  |  |
| 22-25 years | 1 | 2 | 1 |  |  |  |  |  |
| 26-30 years | 2 | 7 | 7 | 2.857 | 4 | 0.582 | 9.488 | Non-Significant |
| 31-35 years | 1 | 13 | 6 |  |  |  |  |  |
| 2. Gender |  |  |  |  |  |  |  |  |
| Male | 0 | 319 | 212 | 0.638 | 2 | 0.727 | 5.991 | Non-Significant |
| Female | 4 |  |  |  |  |  |  |  |
| 3. Religion |  |  |  |  |  |  |  |  |
| Hindu | 1 | 9 | 10 |  |  |  |  |  |
| Christian Muslims | $\begin{aligned} & \hline 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 4.299 | 2 | 0.117 | 5.991 | Non-Significant |
| Sikh | 3 | 13 | 4 |  |  |  |  |  |
| 4. Educational Status |  |  |  |  |  |  |  |  |
| Diploma | 0 | 2 | 1 |  |  |  |  |  |
| Degree | 2 | 128 | 6 | 1.044 | 4 | 0.903 | 9.488 | NonSignificant |
| Master's Degree | 2 |  | 7 |  |  |  |  |  |
| Any other | 0 | 0 | 0 |  |  |  |  |  |
| 5. Monthly Income |  |  |  |  |  |  |  |  |
| Rs 6K-10K | 0 | 6 | 1 |  |  |  |  |  |
| Rs10001-15K | 0 | 6 | 7 | 17.48 | 6 | 0.008 | 12.592 | Significant |
| Rs 15001-20K | 0 | 4 | 5 |  |  |  |  |  |
| Above Rs 20K | 4 | 6 | 1 |  |  |  |  |  |
| 6. Marital Status |  |  |  |  |  |  |  |  |
| Single | 1 | 3 | 3 |  |  |  |  |  |
| Married | 3 | 19 | 11 | 0.533 | 2 | 0.766 | 5.991 | Non-Significant |
| Divorced | 0 | 0 | 0 |  |  |  |  |  |
| Separated | 0 | 0 | 0 |  |  |  |  |  |
| 7. Residential area |  |  |  |  |  |  |  |  |
| Rural | 1 | 10 | 6 | 0.581 | 2 | 0.748 | 5.991 | Non-Significant |
| Urban | 3 | 12 | 8 |  |  |  |  |  |
| 8. Type of Family |  |  |  |  |  |  |  |  |
| Nuclear | 4 | 12 | 11 |  |  |  |  |  |
| Joint | 0 | 8 | 3 | 4.980 | 4 | 0.289 | 5.991 | Non-Significant |
| Extended | 0 | 2 | 0 |  |  |  |  |  |
| 9. Any History of Attention Deficit |  |  |  |  |  |  |  |  |
| Yes | 1 | 121 | 311 | 2.865 | 2 | 0.239 | 5.991 | Non-Significant |
| No | 3 |  |  |  |  |  |  |  |
| 10. Experience (Primary Children) |  |  |  |  |  |  |  |  |
| 1-3 years | 1 | 4 | 4 |  |  |  |  |  |
| 4-6 years | 3 | 12 | 7 | 2.492 | 6 | 0.869 | 12.592 | Non-Significant |
| 7-9 years | 0 | 5 | 3 |  |  |  |  |  |
| Above 9 years | 0 | 1 | 0 |  |  |  |  |  |
| 11. Previous Information |  |  |  |  |  |  |  |  |
| 1-3 years | 2 | 15 | 8 |  |  |  |  |  |
| 4-6 years | 2 | 7 | 6 | 0.741 | 2 | 0.690 | 5.991 | Non-Significant |
| 7-9 years | 0 | 0 | 0 |  |  |  |  |  |
| Above 9 years | 0 | 0 | 0 |  |  |  |  |  |
| 12. Sources of information |  |  |  |  |  |  |  |  |
| Media | 3 | 5 | 6 |  |  |  |  |  |
| Curriculum | 0 | 8 | 4 | 5.540 | 6 | 0.477 | 12.592 | Non-Significant |
| By Family | 0 | 1 | 1 |  |  |  |  |  |
| Internet | 1 | 8 | 3 |  |  |  |  |  |

${ }^{(*)}$ In table AK stand for Adequate Knowledge: MK stands for Moderate Knowledge and IK stands for Inadequate Knowledge

Table 4 demonstrated that there was no significance relation found between association of the level of knowledge scores and other socio-demographic variables except monthly income variable were showing the chi square value (17.48), degree of freedom (6) at 0.008 level of significance because other sociodemographic variables has been showing the
calculated chi-square values are less than the table value at the 0.05 level of significance.

## Discussion

The findings are discussed based on the objective and hypothesis of research study.

Objective 1: To associate the level of knowledge of primary school teachers with the selected demographic variables.
The objective is supported by the findings shown in tables and graphs shows the association between the level of scores with the selected demographic variables. Chi square test was used. The calculated chi square values are less than that table at 0.05 level of significance. Hence there is no significant association of knowledge of teachers with selected demographical variables. The above objectives and findings are supported by a study which was undertaken by Pham HD, et al. (2015) who conducted cross-sectional study to determine the prevalence ADHD in primary school children in the South of Vietnam. 600 children were chosen randomly from primary schools. ADHD rating scale 4 used for parents/ caregivers and teachers. 1200 reports were collected from the predominantly in attentive type predominantly hyperactive type and combined type were $1.7 \%, 5 \%, 1 \%$ respectively. It concluded that the prevalence of ADHD in urban children was 2.2 times more than that in rural children. ${ }^{6}$

## Summary Conclusion

## Findings regarding demographic variables of primary school teachers

- In age group wise distribution of the group, majority of the school teachers belong to the group, 31-35 years i.e. $20(50 \%)$. Followed by 16 ( $40 \%$ ) in $26-30$ age group, $4(10 \%)$ in age group $22-25$ years.
- As per gender wise distribution of school teachers of primary schools in the group, the table reveals that the majority of school teachers are belongs to female group i.e. $35(87.5 \%)$ followed by male group i.e. 5 ( $12.5 \%$ ).
- According to religion wise distribution of the group, half of the teachers belongs to Hindu religion i.e. $20(50 \%)$ while the other half belongs to Sikh religion i.e. $20(50 \%)$ and Muslim and Christian i.e. $0(0.0 \%)$.
- Educational status reveals that majority of school teachers are graduates $20(50 \%)$, followed by masters 17(42.5\%) and diploma.
- In relation to monthly income, most of the teachers income group of belonged to Rs. $10,000-15000$ while $32.5 \%$ ), earned Rs. 20000 /- and the rest earned Rs. $6000-10000$ per month.

As per their marital status majority of the teachers were married i.e. $33(82.5 \%)$, and the rest were single.
Majority of teachers were from urban area i.e. 23 (57.5\%), followed by rural area i.e. 17 ( $42.5 \%$ ). They came from nuclear families.

- In relation to years of teaching experience majority of them belongs to $4-6$ years i.e.22(55.0\%), followed by 13 years i.e. $9(22.5 \%)$, followed by 7-9 years i.e. $8(20.0 \%)$ and above 9 years i.e.1(2.5\%).

As per their previous information about ADHD majority of teachers belongs to group 1-3 years i.e. 25 (62.5\%), followed by 4-6 years i.e. 15 ( $37.5 \%$ ), and in 7-9 years. there was no teacher beyond 9 years of experience.

- According to source of information media was the main source. 14 (35.0\%), followed by curriculum i.e. 12 (30\%) internet i12 (30\%) and through family only $5 \%$.

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