



Awareness and Knowledge of Dyslexia among Elementary School Teachers in India

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Abstract

Around 10% of school children have some degree of dyslexia. In developed countries and the West in particular dyslexia is recognized as a major educational and medical problem, but has not received sufficient attention in developing countries. Elementary school teachers could play a crucial role in identifying dyslexia early and in creating awareness about learning disorders in the community. There are very few studies on the knowledge of school teachers about learning disorders and hardly any involving dyslexia. The purpose of this study is to assess the knowledge of dyslexia in elementary school teachers and the variables influencing the knowledge. Therefore 314 teachers from 32 schools were given a self-report questionnaire, socio-demographic history was elicited and the teachers knowledge was assessed based on their responses about 12 signs and symptoms of dyslexia. 262 teachers were 'aware' of the term dyslexia, only 24 teachers had prior training. Only 1 in 3 teachers had adequate knowledge of dyslexia. Most teachers were in favor of

training sessions on dyslexia and expressed their willingness to attend such sessions. Only a minority of teachers had adequate knowledge of dyslexia. Teaching experience, prior training and exposure were positively correlated with knowledge.

Key Words: Dyslexia, Learning Disorders, School Teachers

INTRODUCTION

Dyslexia is the most common learning disorder in children but it has not received adequate attention in developing countries such as India. Resources are more focused on alleviating other priorities like infections and nutritional disorders. However a flourishing economy and rapidly rising literacy rates have resulted in increasing recognition of this debilitating educational and social disability. Prevalence of dyslexia is estimated to be between 5% and 17% of school aged children. ^[1] The British Dyslexia Association defines dyslexia as a learning difficulty that primarily affects the skills involved in accurate and fluent word reading and spelling. ^[2] A Cochrane review revealed that around 5% of English speakers have significant problems with learning to read words. ^[3] A French study conducted in 1062 children from 20 schools in Paris concluded that 12% had reading impairment. ^[4] In Anglo Saxon countries the prevalence of dyslexia is well documented, even Asian studies have shown similar figures. A study conducted in Thailand administered screening tests for dyslexia in 486 first to sixth grade students and the prevalence of dyslexia was found to be 6.3 percent. ^[5] In India unlike the West awareness about specific learning diseases is poor, for decades, children with dyslexia and other

learning disabilities in India were undiagnosed and labelled as 'difficult' or 'not bright' students and rendered socially and vocationally disadvantaged. A cross-sectional multi-staged stratified randomized cluster sampling study conducted in India revealed that the incidence of dyslexia was 11.2%. ^[6] In a study conducted at a learning disability clinic in Mumbai, specific learning disabilities like dyslexia, dyscalculia and dysgraphia were responsible for 72.76% of the poor school performance cases. ^[7] In non-metropolitan cities, lack of specialty clinics and trained personnel makes identifying and creating awareness of dyslexia an even more herculean task. Four hundred and sixty eight students from class III to class V in Bikaner city, India were given a dyslexia assessment questionnaire followed by a dyslexia screening test and subsequently 48 students (10.2%) were labelled as dyslexic. ^[8] Screening millions of students and identifying children with specific learning disabilities by health personnel is a logistical impossibility. Therefore awareness and knowledge about learning disorders among school teachers may play a major role in early identification and management of children with these disorders. There are very few studies on the

link between teachers having specific knowledge and student reading achievement. [9] The purpose of this study is to assess the knowledge of dyslexia among elementary school teachers and to correlate their knowledge with variables such as teaching experience and prior training or exposure.

METHODOLOGY

A self-report questionnaire was given to 314 elementary school teachers in 32 schools, Awareness and knowledge of dyslexia was assessed based on their response in the questionnaire. Socio-demographic information such as gender, teaching experience and prior training was elicited. The teachers were asked about any prior suspicion of dyslexia in the classroom and their response to those suspicions in terms of reporting it to a superior, parental

counselling or referral to a doctor. The source of their knowledge and the factors influencing their perception of dyslexia was assessed. The teachers were asked about the need for a workshop/module on dyslexia and their willingness to attend it. The knowledge of dyslexia among the teachers was assessed by their awareness about 12 symptoms and signs of dyslexia.

RESULTS

In our study only 5 of the 314 respondents were males; hence gender as a variable influencing knowledge was not assessed. The teaching experience ranged from less than a year to more than 25 years, nearly half the teachers had a teaching experience of less than 5 years, 53 teachers had a teaching experience of more than 20 years, the experience of the teachers is shown on figure 1.

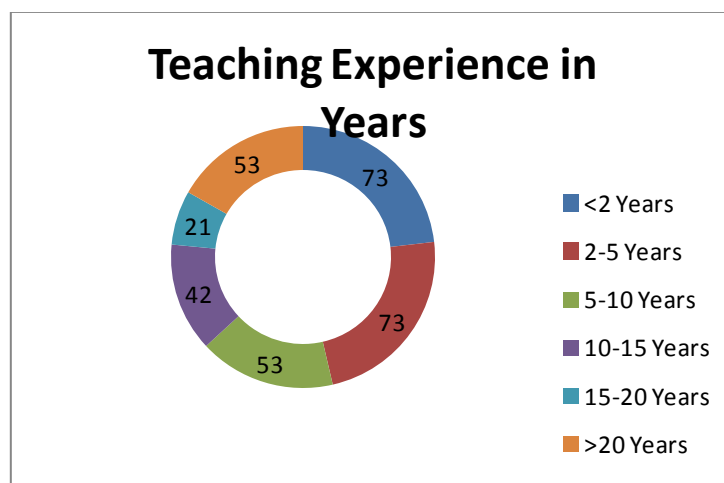


Figure 1: Teaching Experience

Figure 2 shows the major source of information on dyslexia. Books were the major source cited by 114 teachers, 61 teachers attributed their

knowledge to movies and the rest cited colleagues, television and newspapers.

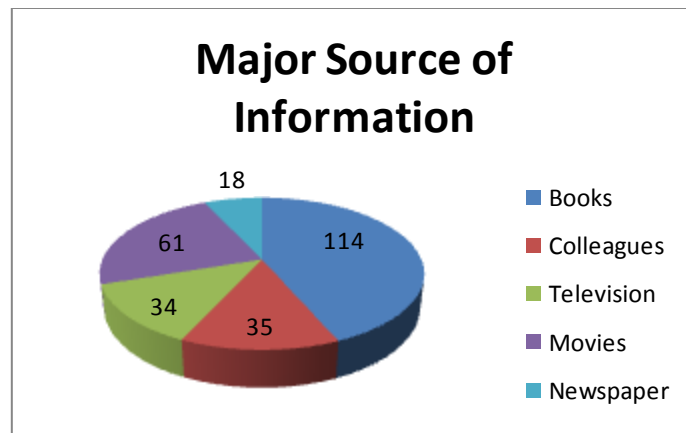


Figure 2: Information Source

Only 24 teachers had prior training on identifying dyslexia, over 90% had not received any prior training. Fifty two teachers had suspected dyslexia in a student at least on one occasion and had reported it to a superior, had counselled a parent or advised a referral to a doctor. All the teachers

who had received prior training were a part of this group. An overwhelming majority- 271 teachers felt that training sessions on identifying dyslexia was required for teachers, but only 209 teachers were willing to attend such training sessions. This is shown on table 1.

Table-1: Teacher Training & Dyslexia

Variable	Yes	No
Prior Training on Dyslexia	24 (7.7%)	290 (92.3%)
Suspected Dyslexia in students	52 (16.6%)	260 (84.4%)
Need for training for teachers on Dyslexia	271 (86.3%)	43 (13.7%)
Willingness to attend training session	209 (66.6%)	105 (33.4%)

Table 2 shows the awareness and knowledge among teachers, 52 teachers admitted that they were not aware of dyslexia or its aspects, 92.3% of the teachers who were 'aware' however felt

that their knowledge was inadequate. The teacher's knowledge was assessed based on their responses to 12 signs and symptoms of dyslexia.

Table -2: Knowledge of Symptoms & Signs

Aware of the term 'Dyslexia'		Aware	Unaware
		262 (83.4%)	52 (16.6%)
Grading of Knowledge		Adequate	Inadequate
		20 (7.7%)	242 (92.3%)
Sr. No	Diagnostic Criteria	Aware	Unaware
1	Problems in learning the letters of the alphabets	211 (80.5%)	52 (19.5%)
2	Difficulty in learning to write the alphabet correctly in sequence.	227 (86.7%)	35 (13.3%)
3	Difficulty in learning and remembering printed words.	176 (67%)	86 (33%)
4	Reversal of letters or sequences of letters, or mirror writing, reads or writes b as d, or p as q, bad as dab etc.	232 (88.6%)	30 (11.4%)
5	Difficulty in learning to read	254 (97%)	8 (3%)
6	Difficulty in reading comprehension.	171 (65.3%)	91 (34.7%)
7	Repeated erratic spelling errors	236 (90.1%)	26 (9.9%)
8	Delay in spoken language	212 (81%)	50 (19%)
9	Difficulty in speaking the right word when speaking	126 (48%)	136 (52%)
10	May be late in establishing the preferred hand for writing	114 (43.5%)	148 (56.5%)
11	May be late in learning right and left and other directionality components such as up-down, front-behind, east west, etc.	79 (30.2%)	183 (69.8%)
12	Problems in learning the concepts of time and temporal sequencing, i.e. yesterday-tomorrow, days of the week, etc.	87 (33.3%)	175 (66.7%)

Table 3 shows the variables influencing awareness and knowledge. Teaching experience and prior training had a positive correlation with knowledge. The teachers response was categorized into 4 groups, those who were not aware, those who identified between 1-4, 4-8 and above 8 signs or symptoms correctly, the teachers

who scored above 8 were termed to have good knowledge, none of the teachers had a score of 12, however 18 teachers were able to identify 11 symptoms and signs of dyslexia correctly, 106 teachers identified 8 or more signs and symptoms correctly, 66.2% of the teachers had inadequate knowledge of dyslexia.

Table-3: Variables influencing Teacher's Knowledge

Teaching Experience in Years	Criteria Awareness - correct score			
	Not Aware	1-4	4-8	>8
<2	26%	32.8%	19.1%	22.1%
2-5	17.8%	27.4%	26%	28.8%
5-10	17%	26.5%	26.5%	30%
10-15	14.3%	23.8%	19%	42.9%
15-20	9.5%	19%	19%	52.5%
>20	7.5%	17%	30.2%	45.3%
Prior Training	4.2%	12.5%	12.5%	70.8%

DISCUSSION

Albert Einstein, Alexander Graham Bell, Pierre Curie and Leonardo Da Vinci, all iconic figures and colossuses in their respective fields had one other thing in common, they were all dyslexics. They might have had trouble in reading and expressing their thoughts, but they and many others of their ilk excelled and did not let their impediment hinder their glorious progress. Therefore any misconception that dyslexics are underachievers is patently untrue. The basic defect in dyslexia is the difficulty in understanding that words can be broken to smaller units called phonemes. Systemic instruction in phonological awareness and letter sound correspondence is

required for early reading and spelling skills, but unfortunately most teachers are not prepared for this crucial task. ^[10] There is a common misconception among teachers that dyslexia is a visual processing defect rather than a defect of the phonological process. ^[11] In our study 52 teachers were not even aware of the term dyslexia, among the rest, two third had inadequate knowledge. These findings are similar to the results obtained in other studies. In a study on learning disability, Seventy eight instructors training elementary school teachers were administered a survey of language concepts and they showed a poor grasp of phonemics. ^[12] In a study of the knowledge of

dyslexia in one hundred pre service teachers in the US and seventy pre service teachers in the UK, the teachers displayed the same common misunderstandings. ^[13] One common misconception is that children 'outgrow' dyslexia, A cohort of 445 school children in Connecticut were recruited when in kindergarten and followed up into adolescence and defects in phonological coding persisted even in adolescence. ^[14] In another study the phonological processing skills of 28 university students with history of early and persistent reading problems was compared with 31 controls and the control group performed significantly better on all phonological processing measures. ^[15] Most studies published deal with the teachers knowledge of concepts of language and their understanding of orthography, there is not much scientific literature on the teachers ability to identify dyslexia. Four hundred and eighty student teachers were surveyed regarding their attitude towards dyslexia. The student teachers demonstrated strongly positive attitude towards dyslexia and a majority expressed confidence in their ability to guide students with dyslexia. ^[16] In our study however 92.3% of the teachers admitted to poor knowledge and were not confident of guiding children with dyslexia. Teaching experience seems to have a positive correlation with knowledge and this is borne by similar studies elsewhere. ^{[17][18]} In the present study experienced teachers outperformed the novices and less experienced teachers.

A diagnosis of dyslexia could be distressing to the parents, in a study, one hundred mothers of children with specific learning disorders were interviewed using the Hamilton anxiety rating scale and anxiety was observed in 76% of the mothers. ^[19] Therefore counselling parents would be an awkward situation for school teachers. In the present study 52 teachers had counselled parents about suspected dyslexia in their children. Training teachers about specific learning disorders and identifying them in children could have significant long term dividends. In a study a group of kindergarten and first grade teachers were trained on concepts of phonological and orthographic awareness during a two week period. Subsequently these teachers and a control group of teachers and their students were followed up and the researchers concluded that teacher's knowledge and perception can be changed and they became more effective in classrooms and consequently student learning improved. ^[20] Studies have also demonstrated that it is possible to teach phoneme awareness to pre literate children too. ^[21] In conclusion the present study reveals that awareness and knowledge among elementary school teachers is poor. Teaching experience and prior training had a significant positive bearing on knowledge. Majority of teachers advocated training programs on dyslexia and expressed willingness to attend such programs. Training sessions for teachers would have major beneficial dividends to the community.

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