

Demographic and Family Issues in Children with Specific Learning Disability

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Abstract

Introduction: Early warning signs related to language development may also include: late talking, inadvertently hitting or grabbing instead of communicating verbally, pronunciation problems, slow vocabulary growth, difficulty rhyming words, trouble learning numbers, the alphabet, the days of the week. **Methodology:** The study was conducted as a cross sectional study of descriptive type from August 2011 – March 2013. Hundred children who studied in two private schools coming under the purview of school health Institute of Child Health and Hospital for Children were recruited into the study. **Results:** It was observed that children with specific learning disability seem to be more interested in sports channel and cartoon channel, rather than vernacular language channel. It is observed that 66% of the children with specific learning disability have access to extra schooling- which higher than the other two groups. **Conclusion:** Children with specific learning disability don't miss breakfast, Children with specific learning disability are punctual and Children with specific learning disability have good attendance.

Keywords: SLD; GLAD; Learning Disability.

Introduction

A child with SLD would be giving cause of concern- particularly as regards reading, writing and spelling, all very important skills in the school curriculum. With experience, however, and from the findings of research studies, it is now evident that there are many signs well before school age, which may suggest such a profile and the consequent difficulties ahead. These may be called as early warning signs of SLD. Therefore, it is important not to ignore a delay in speech. A child who has not spoken even a single word by 1yr 5 months, around 3 words by 1 ½ yr, 2 word sentences by 2 yr or 3 word sentences by 3 yr must be given the benefit of a hearing assessment and an assessment of whether the child is 'at risk' for learning disability. Early warning signs related to language development may also include: late talking, inadvertently hitting or grabbing instead of communicating verbally, pronunciation problems,

slow vocabulary growth, difficulty rhyming words, trouble learning numbers, the alphabet, the days of the week. Many students placed in special education as SLD show minimal gains in achievement and few may actually leave special education [1].

Indicators of Learning Disability in School going Child

SLD causes lack in academic skills in the following areas

Reading skills

Writing skills

Arithmetic skills these are discussed in Annexure III
Diagnosis of SLD All children with scholastic backwardness must have audiometric and ophthalmic examinations done to rule out hearing and visual deficits. The clinical or educational psychologist conducts the standard intelligence test viz., Wechsler Intelligence Scale for Children (WISC) test to determine that the child's intellectual functioning is average or above average. This helps to exclude borderline intellectual functioning and mild mental retardation which cause poor school performance that is more difficult to remediate than SLD. The Special Educator assesses the child's academic achievement by administering standard educational tests to assess the child's performance in areas such as reading, spelling, written language, and

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mathematics. An academic achievement of two years below the child's actual school grade placement or chronological age is considered diagnostic of SLD if the child's intelligence is average or above average.

Remediation of SLD

It is a specific method of instruction or teaching based on specific deficits in performance of a given child. Since every child has his/her unique deficits, an Individualized Education Plan (IEP) needs to be made for every child. The child's strengths are identified so that they may be developed and strategies to cope with the lacunae in learning ability are improvised.

Principles of Remedial Education [2]

The program is started at the level the child has already achieved. The program should proceed at a pace comfortable for the child. Each stage is given a lot of practice and drills as much as possible, these instructions should be given in the form of games, puzzles or in any format that motivates and entuses the child. The intervention should happen as early in primary school as possible (6-8yr of age) so that when the child reaches middle school or secondary school, more advanced reading, comprehension and study skills can be developed.

Each session should preferably be for minimum one hour duration. Two to three sessions must be conducted every week. Sessions should continue all the year round and not only during vacations or schooldays. However, the sessions could be intensified during the vacation

Facilities or Provisions Available for Children with SLD

Children evaluated fully and diagnosed as having learning Disability can avail of certain provisions or facilities extended by various boards of education such as the CBSE or ICSE.

Extra time for board examinations is available Provision of scribes for children with dysgraphia Use of calculators in the examinations – dyscalculia Selection of optional subjects instead of a subject the student is finding difficult to learn [3,4,5].

Although lot of literature is available on Specific Learning Disability, there exists no specific protocol with the School Teacher or the School Health Cell to facilitate them to screen the Scholastic Under-achievers and provide them appropriate guidance.

Methodology

The study was conducted as a cross sectional study of descriptive type from August 2011 – March 2013. Hundred children who studied in two private schools coming under the purview of school health Institute of Child Health and Hospital for Children were recruited into the study.

These hundred children were identified by the Class teacher as scholastically backward based on his failure to progress into the subsequent grade in the Activity Based Learning method in one or more subjects. Both individual and institutional consent obtained prior to enrolment in the study.

Tools Used

General Information

A structured data collection form was used to collect information from the mother and class teacher to assess

Demographic parameters

Family aspects

Sociocultural aspects

Other information related to the intellectual functioning of the child

Health Related Information

The following aspects of the general health of the child were recorded:

- ▲ Anthropometry
- ▲ Hemoglobin status

Vision

Visual acuity was assessed using a Snellen's Chart

Hearing

The selected children underwent an otoscopic examination and Pure tone audiometry using Amplaid 300 clinical audiometer. Following a thorough ENT examination, pure tone audiometry was performed in a sound proof room for these children. Both air and bone conductions were tested at low, mid and high frequencies.

Paternal Alcoholism

Indulgence of alcohol abuse by father

This affects the harmony at home (irrespective of frequency)

Play: Any extra academic activity involving physical exertion – both organized and unorganized.

Breakfast: The first meal of the day that has been taken in the morning, before going to school (i.e., before 9am)- 'Breakfast' is any food item solid or liquid excluding caffeinated drinks

Television Viewing: Having access to television and spending at least half an hour per day in viewing television

Late Comers: Children who come late to school - after ringing of the bell or singing of the prayer song at least once a week for four week OR three days a month.

Anemia: Complete Blood count hemoglobin estimation less than Or equal to 12 gm %.

Results

Hundred scholastically backward children who were identified with the help of the class teacher fifty children were selected out of 340 children studying in the first school and the other fifty were selected from amongst the 614 children studying in the second school, based on the sample size required for the study four children studying in the first school were being brought up in a hostel.

Table 1: Pattern of Demographic and Family issues in children with Specific Learning Disability (n=100)

		SLD	Slow Learner	Subnormal Intelligence
Sex	Male(60)	12(50)	36(70)	12(60)
	Female(40)	12(50)	20(30)	8(40)
Housing	Advantage	12(37.5)	16(50)	4(12.5)
	Disadvantage	8(11.5)	44(64.7)	12(17.6)
Lighting	Advantage	16(16)	28(28)	12(12)
	Disadvantage	8(8)	48(48)	8(8)
Water Supply	Advantageous	12(50)	12(21.4)	8(40)
	Disadvantage	12(50)	44(78.5)	12(60)
Maternal Education	Illiterate	2(2)	20(20)	6(6)
	Educated	22(22)	34(34)	10(10)
Maternal Occupation*	Unemployed	12(12)	4(4)	6(6)
	Employed	12(12)	50(50)	10(10)
Maternal Health	Help	8(8)	10(10)	2(2)
	No help	16(16)	44(44)	14(14)
Paternal Alcoholism	Present	10(10)	38(38)	6(6)
	Absent	14(14)	16(16)	10(10)
Sibling with similar problem	Present	10(33)	16(56)	4(11)

* - p-value statistically significant, P <0.05

Table 2: Pattern of Socio-Cultural and Scholastic issues in children with specific learning disability(n=100)

	SLD(n=24)	Slow learner(n=56)	Subnormal Intelligence(n=20)
Duration of play(hrs)	0.94	0.82	1.03
Television access	10(43)	32(63)	12(60)
TV viewing			
Tamil	2(20)	8(33)	10(83)
Sports/ Cartoon	8(80)	24(66)	2(17)
Tuition	16(66)	28(50)	6(30)
Excuses during GLAD	14(56)	22(39)	6(30)
Incentives during GLAD	14(56)	16(28)	4(20)

It was observed that there is no sex preponderance in children with specific learning disability. It can be observed that a slightly higher population of the children with SLD live in advantaged housing conditions (own /pucca house), whereas a large population of the slow learners live in disadvantaged housing conditions. Children with specific learning disability have access to tube light for study purposes in a higher percentage as compared with slow learners who study under disadvantaged lighting(bulb/

common lighting) conditions in a majority of times. Advantageous water supply was considered in those children in whom water was readily available at home (separate water supply). Children with specific learning disability have advantageous water supply in a higher percentage, as compared with slow learners who study under disadvantaged water supply (common water supply) in a majority of times. It was observed that 50% of the dyslexic children had mothers who were unemployed. Out of the 28

children with illiterate mothers, 20 children were classified as slow learners and 2 children had specific learning disability 33% of the children with specific learning disability received help from mother in school related activities, whereas only 10% of the children with subnormal intelligence and 16% of the children who are classified as slow learners received maternal help. Out of the academic problems that were present in siblings of 30 children 4 of them had subnormal intelligence, 16 of them were slow learners and 10 of the (46%) were children with specific learning disability. Hence a genetic factor that may be operating in these children needs to be evaluated. The difference between the three groups pertaining to the various factors was not correlated in any of the factors except for maternal occupation. This can be explained by the small sample size of the study.

In the study population- 60% of the children with subnormal intelligence, 43% of the children with specific learning disability and 73% of the children who are slow learners have access to television. It was observed that children with specific learning disability seems to be more interested in sports channel and cartoon channel, rather than vernacular language channel. It is observed that 66% of the children with specific learning disability have access to extra schooling- which higher than the other two groups. Out of the 34 children who required incentives to complete the test, 14 of them i.e more than 50% of the children required incentives like chocolates, coloring pencil etc. Out of the 42 children who made excuses while performing the GLAD, it was noted that 14 of them had specific learning disability- i.e more than 50% of children with specific learning disability made excuses. Though results show a trend, It is interesting to make the following observations:

- Children with specific learning disability don't miss breakfast
- Children with specific learning disability are punctual
- Children with specific learning disability have good attendance

Discussion

It is observed in this study that six children have varying degrees of Hearing Impairment –four of them in mild degrees and two severe degree of Hearing Impairment. This is comparable to the 5% hearing impairment that has been reported by Bess H et al [6]. This Hearing impairment may not be the only

causative factor in these children, but is definitely a contributory factor. It is observed in this study that ten children had varying degrees of Refractory eye errors. This is comparable to the 5-10% prevalence of Visual impairment that has been reported in previous studies by Dandona R et al and Trivedi V et al [7,8]. Children with visual impairment may present with certain features such as deterioration in handwriting, slowness in copying from the board, deterioration activities dependent on eye hand coordination and asking for written instructions to be given verbally.

It was observed in this study that eighty out of the hundred children are Anemic as per the WHO Definition – This is very much higher compared to the prevalence of Anemia reported in School going children from Gulbarga as 70.9% 51 and 38% reported in a study from Urban Punjab.. It can be hypothesized that the higher prevalence of Anemia in the study population reflects that Anemia could be a contributory factor for the poor Scholastic performance as Anemia leads to Cognitive impairment.

Specific Learning Disability

In this study 24 out of 100 children were diagnosed as Specific Learning Disability– six children each had Disorders of Reading skills, written language, expressive language and mathematical Skills. It is interesting to observe the lesser occurrence of problems with Reading Skills in this study versus the other studies by Shenoy et al and Venugopal et al. This may be due to the inherent properties of the Tamil language which is more phonetic (i.e – the writing and pronunciation being very much similar) as compared to english (in which a single word like bus, knife etc can have varied pronunciation).

When the GLAD test was administered to the children, the children with Specific Learning Disability took a longer duration to complete the test – Slow writing is a recognized feature of SLD. Also children with SLD make frequent excuses and demanded lots of incentives- this may be explained by the normal IQ of these children, use avoidance tactics and exploit the situation by making demands for incentives.

Conclusion

Even though this study emphasis on socio demographic factors, the results should be seriously considered and Specific Learning Disability condition as an Emergency condition Children with scholastic backwardness and advantageous

socioeconomic conditions must be subjected for assessment by GLAD to look for Specific Learning Disability

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