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Screening for Learning Disability among Adolescents Using Child Adolescent Psychiatric Screening (CAPS) Tool

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Abstract:

Learning disability is a very common developmental disorder that we encounter in school age children. A cross sectional study was conducted in a government school of Pathanamthitta district. The study population was adolescent students belonging to the age group of 12 -18 years. Children and their parents who gave consent and were present on the day of data collection were included in this study. Total 273 children and parents were screened. Screening was done using Child Adolescent Psychiatric Screening (CAPS) tool. Out of the total 273 subjects, 72 % of students were in the age group of 15-18years. The prevalence of symptoms suggestive of learning disability in the study subjects was 31.14%. Among this, 28.2 % had mild, 2.19 % had moderate and 0.73% had severe symptom complex suggestive of learning disability. According to the parents, prevalence of symptom wise learning disability was 13.6% (mild12.08%, moderate 1.46% and severe none). Total prevalence of symptom complex group of learning disability as per children is 31.14% and as per parents is 13.6%. Girls showed an increased prevalence compared to boys. The present study focus on importance of early detection of learning disability in children and their parent's awareness.

Keywords: ***Adolescents, CAPS, Learning disability, Parents awareness***

Introduction

A developmental disorder of childhood leads to future consequences which are major public health concerns globally. Many problems in adulthood may be the continuation of childhood issues. If we detect such problems early in childhood, most of these issues could be prevented in the later life. Learning disability can be a life-long condition, affecting many aspects of life, including education, employment, family life, and daily routines. Screening of disabilities like learning disabilities at the earliest has a greater impact on improving the quality of life. As per reports in 2015, about 7 percent of children living in families at or above the poverty line, and 11percent of children below it, were identified as having learning disability.[1]

Learning disability is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities.[2] The risk factors in learning disorders includes diseases, malnutrition, tobacco and alcohol use during pregnancy, trauma and brain injury during birth, diseases and trauma during infancy and childhood. Environmental factors like lead, mercury poisoning and psychosocial factors like neglect and loneliness also play an important role.[2]

Learning disabilities may be unnoticed in many situations. Parents should be aware of the problem for early detection and to initiate appropriate interventions. Teachers also have significant role in identification and intervention. Hence early detection, assessment and intervention in learning disability is essential for the development of the child. A comprehensive assessment and evaluation focussing children, family, school and community is a cost effective measure for managing learning disabilities.

Empowering the children & adolescents, their parents, teachers and other stakeholders is necessary to improve the quality of life. Emphasis should be given on parenting, parent-child intervention, capacity building of children through programmes like life skill education. Further strengthening awareness and involvement of communities and systems like school and health system, legal system, NGOs, Local Self Govt, ICDS etc will also benefit children with learning disability.[3]The present study aims to know the prevalence of symptom complex group (mild, moderate &severe) suggestive of learning disability among

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adolescents as well as to study the awareness of parents regarding this symptom complex group.

Methodology

A cross sectional study was conducted in a government school of Pathanamthitta district, Kerala. Study duration was one year (from 2013 and 2014). The study population was adolescent students in the age group of 12 -18 years. District level authorities were informed and permission obtained for the study. Consent was obtained from the school authorities. Information to all parents were sent through the children regarding the procedures including the date and time. Children and their parents who were present in the day of data collection were included in this study after taking consent. Total 273 children were screened. Screening was done using Child Adolescent Psychiatric Screening (CAPS) tool.[3] It is a validated tool used for screening of children for possible mental health problems. The tool (CAPS) used in the study, can provide an initial indicator for identifying target symptoms or disorders. There are 18 symptom complex groups, having 85 questions. In this, one symptom complex deals with learning disability. The responses are none, mild, moderate and severe. Same questionnaire was applied for parents also to assess the knowledge of parents regarding their child's problem. Students who were found to be having symptom complex group suggestive of learning disability were referred to psychiatry department.

This study has certain limitations of recall bias, self - reported symptoms might have been influenced by cultural factors and a small sample size. Definite diagnosis can be made only by a trained clinician after a thorough assessment.

The data obtained was entered in the excel sheet and analysed using SPSS software16. For the purpose of analysis, each symptom complex response was scored as 0,1,2,3 with maximum score of 6.Based on this total score ,each subject was classified as, no learning disability (0 score), symptoms suggestive of mild learning disability (score<2) , moderate disability(score <4)and severe disability(score <6).Chi square /Fisher's exact test was done to find out the statistically significant association.

Table 1: Age wise distribution of study population

Age	No	%
12 – 14	76	27.8
15 -18	197	72.2
Total	**273**	**100**

72 % of students are in the age group 15-18.

Table 2: Gender wise distribution of study population

Sex	No	%
Male	158	57.9
Female	115	42.1
Total	**273**	**100**

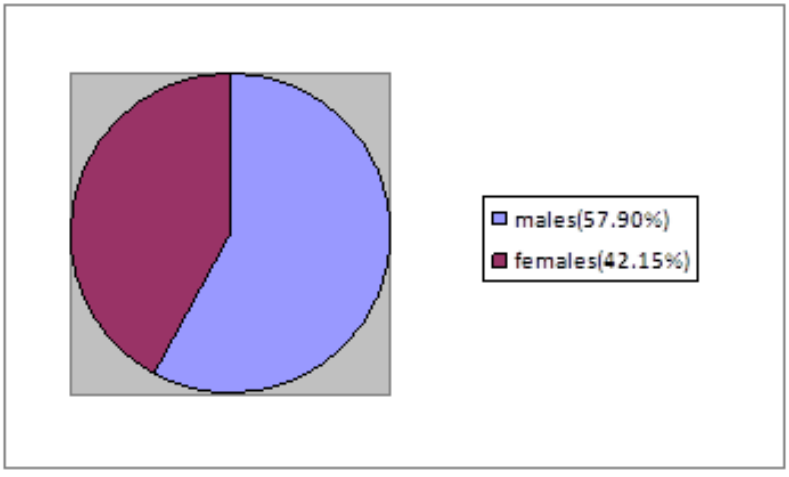

Figure 1: Gender distribution

Out of 273 children screened 57.9 % are boys and 42.1 % girls.

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Table 3 Symptoms of Learning Disability reported by students

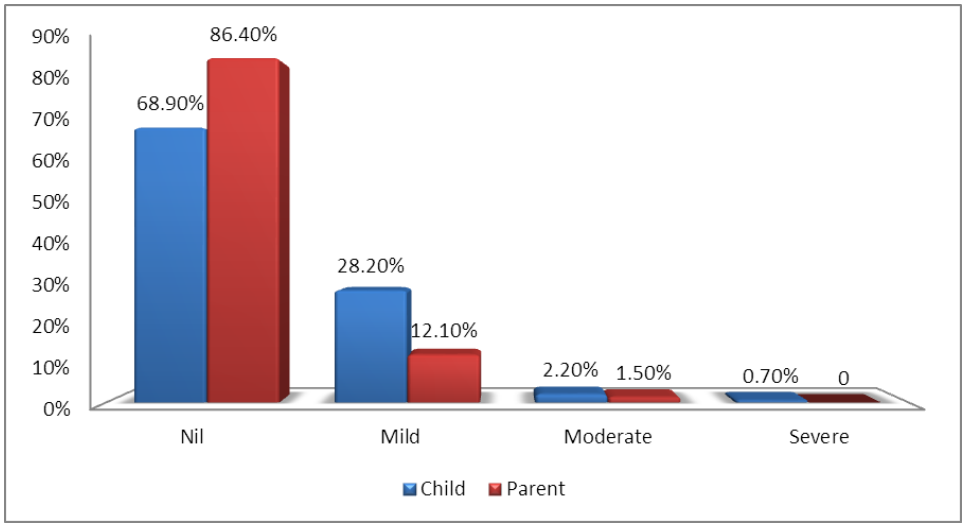
CAPS symptoms of Learning Disability	Students n (%)			
	None	*Mild*	*Moderate*	*Severe*
Does poorly at sports or games requiring physical coordination skills	21 (7.7)	220 (80.6)	29 (10.6)	3 (1.1)
Has difficulty at school with: reading, writing, math, spelling	18 (6.6)	198 (72.5)	48 (17.6)	9 (3.3)

Table 4 -Symptoms of Learning Disability reported by parents

CAPS symptoms of Learning Disability	Parents n (%)			
	None	*Mild*	*Moderate*	*Severe*
Does poorly at sports or games requiring physical coordination skills	53 (34.7)	82 (53.6)	15 (9.8)	3 (2)
Has difficulty at school with: reading, writing, math, spelling	51 (33.6)	76 (50)	24 (15.8)	1 (0.7)

Table 5-Prevalence of symptom complex group of learning disability

CAPS score	Child	parent
Nil	188(68.9%)	236(86.4%)
Mild	77(28.2%)	33(12.1%)
moderate	6(2.2%)	4(1.5%)
Severe	2(0.7%)	0



Results

Total 273 students and their parents were screened using CAPS. Among the students screened, 72.2 % of students were in the age group of 15-18years and 27.8% were in 12-14 age group (table 1). Out of this 57.9 % were boys and 42.1 % were girls (table 2). The prevalence of symptoms suggestive of learning disability in the study subjects was 31.14%. Among this, 28.2 % had mild, 2.19 % had moderate and 0.73% had severe symptom complex suggestive of learning disability. (table3). According to the parents, prevalence of symptom wise learning disability was 13.6% (mild12.08%, moderate 1.46% and severe none) (table 4). Total prevalence of symptom complex group of learning disability as per children is 31.14% and as per parents is 13.6% (table 5). Girls showed an increased prevalence compared to boys and this gender wise difference was found to be statistically significant. (For girls, p value 0.015, significant at 0.05 level.)

Discussion

Children with learning disability usually face difficulties in their scholastic performance despite having normal

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intelligence. Early diagnosis and intervention in these children will result in significant improvement in their academic profile, boost self-confidence and social competency.

Learning Disorders (LD) affect about 2-10% of the school-age population.[4] In a study conducted in India by G Sridevi et al among school children of 6 to 13 years showed prevalence of 19% learning disability.[5] In our study screening using CAPS tool we identified 31.14% of children having symptom complex suggestive of learning disability that has to be confirmed later. Choudary (2012) reported that prevalence of learning disability is 10.25% in Class III to V at Bikaner City, India. Learning disabilities are found three to four times more often in boys.[6] Where as in the present study showed an increased prevalence among girls than boys which was statistically significant. The responses of children and their parents regarding the symptom complex of learning disability showed a notable difference in this study .Only 13.6% prevalence of learning disability symptoms were identified by their parents as against 31.14% by the children. This emphasises the need for increased awareness among parents about learning disability and importance of early detection. A team approach is needed with a referral line starting with parents/teachers/community health workers who may suspect a problem, which may be diagnosed and managed in the primary care settings itself.[3]

Conclusion

The present study focus on the importance of early detection of learning disability in children and their parents' awareness. This will help in early intervention for their better performance. A comprehensive approach is essential to deal with learning disability. School health services should compulsorily include screening for mental and behavioural health problems. Parents should be better educated, enabling them to find out the changes that occur in their children at the earliest and to get it corrected.

A holistic model that look into physical, mental and the social aspect (family, school, neighbourhood, peers etc) of adolescents will help us to understand the problems and to plan management in a more comprehensive way. Thus Learning Disability-a condition that can last a person's entire life, may be alleviated with right support.

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