

Original Research

STRESS, ANXIETY & DEPRESSION AMONG TEENAGE STUDENTS WITH SPECIFIC LEARNING DISABILITY: CROSS SECTIONAL STUDY

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Abstract:

Introduction: Specific Learning Disability (SLD) is a disorder in one or more of the basic psychological processes involved in understanding or in using language, whether spoken or written, and which manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. These Children have deficits despite average or above average level of intellectual functioning. Presence of SLD can be extremely frustrating for a school child. The stress of having a Learning Disorder is often exhibited overtly through school maladjustment, clinical maladjustment, emotional symptoms and Depression resulting in subsequent behavioral problems.

Methodology: Analytical cross-sectional study was conducted involving Children diagnosed and certified to have learning disability, Children diagnosed on the basis of intelligence test i.e WISC III / IV and psychoeducational testing i.e. Wood Cock Johnson score. The study was carried out in the Life Centre for learning disability on OPD basis where students brought by their parents for consultation and learning disability assessment.

Result: Stress amongst participants was the more consistent finding with 58 (29) of participants in the study exhibiting signs and symptoms of stress as per DAS scale followed by depression in 26(13) participants and anxiety in 12 (6.5) participants.

Conclusion: Depression, anxiety & stress was significantly more in 15-18 years age group while no significant association was observed with gender.

Keywords: Depression, Stress, SLD

Introduction:

Specific Learning Disability (SLD) is a disorder in one or more of the basic psychological processes involved in understanding or in using language, whether spoken or written, and which manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations.¹ These Children have deficits despite average or above average level of intellectual functioning. Presence of SLD can be extremely frustrating for a school child. Considering the amount of competitiveness in present day schools, a child's academic skill is many times taken as a gold standard by which he or she is judged, regardless of his or her other non-academic talents. These academic challenges, combined with an unsupportive social and familial atmosphere only adds further burden for a child with SLD.¹

According to DSM-52 depression is diagnosed in the presence of five (or more) of the listed symptoms. At least one symptom must be depressed mood or loss of interest or pleasure. The symptoms cause clinically significant distress or impairment in social, occupational or other

important areas of the individual's life.² The diagnosis of depression in childhood is quite complex, because most of the time, the child does not have the resources to recognize their emotions and thoughts. Thus, the most appropriate way for the identification of children with depressive symptoms is the watchful eye of parents and teachers as they have significant relationships in the child's life and possibly follow their daily activities, being of great importance these observations, since the depression has a negative impact on social, academic and family of this group. The stress of having a Learning Disorder is often exhibited overtly through school maladjustment, clinical maladjustment, emotional symptoms and Depression resulting in subsequent behavioral problems.^{3,4}

Early diagnosis and intervention in children with learning disorders makes a substantial improvement in self-confidence and social competency, which helps them in opening windows of opportunity in school and in the world of work. With this background present study was planned to assess the following objectives.

Objectives:

1. Assessment of Depression, Stress & Anxiety among teenage students with Specific learning disability.
2. To determine the awareness of parents about SLD and existence of these negative emotions in their children.
3. To compare the difference in the occurrence of these symptoms in children of SSC/ICSE board.
4. To determine the relationship between level of depression with factors such as age and gender.

Methodology:

Analytical cross-sectional study was conducted involving Children diagnosed and certified to have learning disability, Children diagnosed on the basis of intelligence test i.e WISC III / IV and psychoeducational testing i.e. Wood Cock Johnson score. The study was carried out in the Life Centre for learning disability on OPD basis where students brought by their parents for consultation and learning disability assessment.

The study was initiated after obtaining permission from the Institutional Ethics Committee, Ethics Committee for Academic Research Projects (ECARP). Participants were enrolled after obtaining written informed consent from parent/ guardian (if the participant is aged less than 18 years), or from the participant (if the participant is aged 18 years or above). Child-participant aged 10-18 years were approached for providing assent, after his/ her parents have provided consent. The data was collected after obtaining informed written consent with no patient identifiers included in the case record form. The patient was identified only with his/ her study number.

Inclusion Criteria:

1. Children aged more than 10 years and less than 18 years
2. Diagnosed with specific learning disability as stated above
3. Parents/ guardians who gave consent for participation in the study

Exclusion Criteria:

1. Physical, visual or auditory handicap
2. Non English medium students.
3. Children diagnosed with a chronic illness or disease with duration of >3 months
4. Diagnosed to have any psychiatric illness for which they are already on medication.

Assessment of the level of depression was done based on the scale provided (DASS). LD clinic is a joint venture of Pediatrician and psychiatrist. Diagnosis was done by the Psychiatrist. Once diagnosed as a clinical case of depression disclosure was done by psychiatrist

TOOLS:**1. Parent Interview Proforma**

This includes questions related to the parents' socio-demographic details as well as details of the parental awareness about SLD

2. Depression, Anxiety and Stress Scale (DASS; Lovibond & Lovibond, 1995)^{5,6}

The DASS scale was applied to subjects (10-18 yrs). It is a 42-item questionnaire which includes three self-report scales designed to measure the negative emotional states of Depression, Anxiety and Stress. The essential function of the DASS is to assess the severity of the core symptoms of depression, anxiety and stress. The reliability scores of the scales in terms of Cronbach's alpha scores rate the Depression scale at 0.91

Each of the three scales contains 14 items, divided into subscales of 2–5 items with similar content. The Depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. A score of 14 and above indicates moderate to severe Depression. The Anxiety scale assesses autonomic arousal, skeletal muscle effects, situational Anxiety, and subjective experience of anxious affect. The Stress scale is sensitive to levels of chronic non-specific arousal. A score of 19 and above indicates moderate to severe Stress.

Sample size:

Sample size calculated by following formula $n = Z^2 p(1-p) / d^2$

Where, n is sample size Z is the z-statistics for desired level of confidence p is the estimate of expected proportion with the variable of interest in the population.⁷ d (precision) is half width of the desired interval With 95% CI

$Z = 1.96$ $Z^2 = 3.8416$ $p(\text{proportion}) = 0.16$ $1-p = 0.84$ $d = 0.05$ $d^2 = 0.0025$ $p \times (1-p) = 0.13$
 $Z^2 p(1-p) = 0.4992$ $n = 199$ Rounding off as 200.

Statistical analysis:

1. Qualitative data was represented in the form of frequency and percentage.
2. Association between qualitative variables was assessed by chi square test
4. Quantitative data was represented using mean \pm SD and median

Result:

Total 200 students participated in the study. There was equal distribution of boys and girls included in the study, with each of them comprising 50% of study population. Children included in the study were those from class 5th to 12th. Most of them were from 10th Std (23.5%) followed closely by class 11th (23%). Study was planned in a manner to have equal number of students from the two main educational boards i.e SSC & ICSE comprising 50% of study population from each.

Table No. 1: Age wise distribution of participants recruited in the study

Age group	Number	Percentage
10	4	2
11	2	1
12	24	12
13	30	15
14	40	20
15	58	29
16	41	20.5
17	1	0.5
Total		

Of the 200 participants included in the study, maximum participants i.e. 58(29%) were 15 years old. Age of participants under study varied from 10 years to 17 years. The mean age of study participants was 14.21 ± 1.46 years. There was equal distribution of participants in age groups 10-14 and 15-18 years with both the age groups having 100 children each.

Table No.2: Distribution of participants as per occurrence of depression, anxiety and stress

Variable	Frequency	Percentage
Depression	26	13
Anxiety	13	6.5
Stress	58	29

Stress amongst participants was the more consistent finding with 58 (29) of participants in the study exhibiting signs and symptoms of stress as per DAS scale followed by depression in 26(13) participants and anxiety in 12 (6.5) participants

Table No.3: SLD awareness among the parents based on PAQ

SLD awareness	Number	Percentage
Yes	167	83.5
No	33	16.5
Total	200	100

Parents of most of the children(83.5%) in our study were aware about the SLD of their children .

Table No.4: Distribution of study participants as per board of study & depression, anxiety & stress

Board	Depression			Total
	Normal	Mild	Moderate	
SSC	87	12	1	100
ICSE	87	12	1	100
Total	174	24	2	200
	Anxiety			
SSC	96	3	1	100
ICSE	91	8	1	100
Total	187	11	2	200
	Stress			
SSC	69	19	12	100
ICSE	73	17	10	100
Total	142	36	22	200

Mild as well as moderate depression was equal among children from either SSC/ICSE boards. Mild anxiety was seen more in ICSE children compared to SSC. Moderate anxiety was equal in both. Difference observed was not statistically significant. Mild as well as moderate stress was seen more in SSC children compared to ICSE. Difference observed was not statistically significant.

Table No.5: Age wise distribution of participants with depression, anxiety & stress

Age Group	Age 10-14 years	Age 15-18 years	P value
Depression			
Yes	3	23	0.002
No	97	77	
Anxiety			
Yes	3	10	0.04
No	97	90	
Stress			

Yes	15	43	0.001
No	85	57	

Depression, anxiety & stress was significant more in 15-18 years age group compared to 10-14 years of age.

Table No.6: Gender wise distribution of participants with depression, anxiety & stress

Age Group	Male	Female	P value
Depression			
Yes	11	15	0.4003
No	89	85	
Anxiety			
Yes	8	5	0.38
No	92	95	
Stress			
Yes	27	31	0.53
No	73	69	

Depression, anxiety & stress was not significantly associated with gender.

Discussion:

The present study was carried out with the aim of assessing depression, anxiety & stress among teenage students with specific learning disability. Children were diagnosed with specific learning disability on the basis of intelligence test i.e WISC III / IV and psychoeducational testing i.e. Wood Cock Johnson score. Study also aimed to determine the awareness of parents about SLD and whether they were aware about the existence of negative emotions in their children.

Present study revealed that, maximum 29% of recruited children exhibited symptoms of stress. 62% of these children had mild stress while rest 38% had moderate stress. Most of the children exhibiting stress belonged to the age group of 15-18 years. Also, there was statistically significant difference in occurrence of stress among children of age groups of 10-14 and 15-18. This was also seen in previous study by Miller⁸ which indicated that older adolescents with SLD tend to be more dissatisfied with their lives and their self-esteem and self-concept is lower than their typically developing peer.⁹

Present study revealed that the overall prevalence of depression in children with SLD was 13%. This figure was similar to a study conducted by Gajre et al.¹⁰ However this figure is higher than prevalence of 1% as shown in community surveys by Srinath et al, 2005. Of the 13% children with depression in the present study, 92% of the children had mild depression while only 8% had moderate depression. Most of the children exhibiting depression belonged to the age group of 15-18 years. Similar findings were observed in the study conducted by Synder et al.¹¹ Majority of the children exhibited mild depression in the present study. Similar findings were seen in previous study by Maag.¹²

Conclusion:

Overall prevalence of stress was more followed by depression and anxiety. Observed difference between Depression, Anxiety and Stress among the students from SSC/ICSE boards was not statistically significant. Students with SLD irrespective of their board of education suffer from depression, anxiety as well as stress. Depression, anxiety & stress was significantly more in 15-18 years age group while no significant association was observed with gender.

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