ORIGINAL ARTICLES

RECOLLECTIONS OF LEARNING-DISABLED ADOLESCENTS OF THEIR SCHOOLING EXPERIENCES: A QUALITATIVE STUDY

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ABSTRACT

BACKGROUND: Little is known about the actual impact of the schooling experience on adolescents with specific learning disability (SpLD). **AIMS:** To analyze the recollections of adolescents with SpLD who were undergoing education in regular mainstream schools. **SETTINGS AND DESIGN:** Prospective interview-based study conducted in our clinic. **MATERIALS AND METHODS:** Adolescents' responses to a semi-structured interview were audio-taped, transcribed verbatim and interpreted by content analysis. The number of participants was determined by 'saturation sampling,' resulting in a total of 30 adolescents. **RESULTS:** Twelve (40%) adolescents had 'overall' neutral recollections, 9 (30%) had 'overall' positive recollections and 9 (30%) had 'overall' negative recollections about having SpLD during their schooling. Fourteen (46.7%) adolescents stated 'getting provisions' as good features, whereas 7 (23.3%) stated 'feeling different from classmates' and 6 (20%) stated 'being teased by classmates about their disability' as bad features of having SpLD. Nineteen (63.3%) adolescents remembered classroom teachers being supportive, while 7 (23.3%) remembered being insulted by them. Of the 21 adolescents who had undergone remedial education, only 10 (47.6%) acknowledged that it had benefited them. Twenty-one (70%) adolescents stated that availing provisions helped in getting better marks in examinations. Ten (33.3%) adolescents had negative recollections about their parents' behavior in relation to their disability. Twenty (66.7%) adolescents wanted changes in their school to help students with SpLD. **CONCLUSION:** Improving the knowledge of classroom teachers, classmates and family members about SpLD and about the rationale of provisions will help reduce the unpleasant experiences students with SpLD undergo during their schooling years.

Key words: Dyslexia, interviews, mental recall, needs assessment, qualitative research

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INTRODUCTION

Specific learning disability (SpLD) is a lifelong neurodevelopmental disorder which manifests in childhood as persistent difficulties in learning to efficiently read ("dyslexia"), write ("dysgraphia") or do simple mathematical

calculations ("dyscalculia") *despite* normal intelligence, conventional schooling, intact hearing and vision, adequate motivation and sociocultural opportunity.^[1,2] Students with undiagnosed SpLD fail to achieve school grades that are at a level that is commensurate with their intelligence.^[1-3]

Ideally, SpLD should be diagnosed early, when the student is in primary school (class standards I to IV).^[1,2] The student then needs to undergo remedial education sessions twice or thrice weekly for a few years to achieve academic competence. During these sessions, the student undergoes systematic and highly structured training exercises to reduce or eliminate the deficiencies identified during the student's educational assessment.^[1,2] In our city since there is a general lack of awareness about SpLD, the student is usually in class standard VII or higher class standard by the time the condition is diagnosed.^[2] Due to time constraints, the management of SpLD is now based more on providing provisions (accommodations) rather than remediation.^[2] These provisions, e.g., exemption from spelling mistakes, availing extra time for written tests, dropping a language and substituting it with a work experience subject, and dropping algebra and geometry and substituting them with lower grade of mathematics and another work experience subject, help these students cope up in a regular mainstream school.^[1,2]

Little is known about the actual impact of the schooling experience on adolescents with SpLD, as they recall it. Hence we undertook this study to analyze the recollections of adolescents with SpLD who were undergoing

education in regular mainstream schools.

MATERIALS AND METHODS

Selection of cases

This study was conducted from June to August 2007. These adolescents had been earlier assessed at our clinic and were certified as having SpLD. They were now revisiting our clinic for certification of their disability for their class standard X board examinations and were serially interviewed. The socio-demographic characteristics of each adolescent were noted. The modified Kuppaswami's classification was used to determine the adolescent's socioeconomic status.^[4,5] The interview instrument, designed for this study by the investigators, had both open-ended and close-ended questions to guide the interview [Table 1]. Before the study commenced, the interview instrument was critiqued for content validity and clarity by an expert in qualitative research methods. The semi-structured interview was

Table 1: Questions asked during the semi-structured interview

1. Overall, do you feel good or bad about having SpLD during your schooling?
2. What were the good things about having SpLD?
3. What were the bad things about having SpLD?
4. Any good thing your classroom teachers did?
5. Any bad thing your classroom teachers did?
6. Any good thing your classmates did?
7. Any bad thing your classmates did?
8. What were the good things about remedial education?
9. What were the bad things about remedial education?
10. Any good thing your remedial teachers did?
11. Any bad thing your remedial teachers did?
12. What were the good things about provisions?
13. What were the bad things about provisions?
14. Any good thing your parents did?
15. Any bad thing your parents did?
16. Any good thing your siblings did?
17. Any bad thing your siblings did?
18. What changes would you like in your school to help children with SpLD?
19. How do you feel about your future?
20. What career do you wish to do in the future?

conducted over a period of 20 to 30 minutes in English in a quiet, secluded room. A single investigator (VM) carried out all interviews, which were audio-recorded for future analysis. The adolescent was interviewed without the parent(s) being present.

The number of participants was determined by 'saturation sampling,' that is, when the participants repeated the same information and no new data was forthcoming, resulting in a total of 30 adolescents.^[6] Adolescents with SpLD who had comorbid attention-deficit hyperactivity disorder (ADHD) or any associated chronic illness such as epilepsy or asthma were to be excluded as these conditions themselves can influence their recollections of their schooling years. The diagnosis of co-occurring ADHD was made by the pediatrician (SK or MK) and also confirmed by our clinic's child psychiatrist. For diagnosing ADHD, the standard recommended method was followed, namely, by ascertaining that the child's specific behaviors met the "Diagnostic and Statistical Manual of Mental Disorders -IV-revised" (DSM-IV-R) criteria.^[7]

Consent and ethical approval

Our study was approved by the scientific and ethics committees of our institution. Written informed consent of the accompanying parents and verbal assent of the adolescents to participate in the study were taken.

Data analysis

The adolescents' responses were transcribed verbatim and analyzed independently by 2 investigators (SK and VM). Differences in interpretation between the 2 investigators were identified, and the third investigator (MK) was

consulted before an agreed interpretation was arrived at. Responses to questions 1 and 19 were interpreted by Carley's eight-category coding steps for conducting conceptual analysis, a type of content analysis, and graded as neutral, positive or negative.^[8] Adolescents' responses to questions 2 and 3 were grouped into 5 themes: classmates, classroom teachers, interactions with the community, personal and provisions.

RESULTS

Characteristics of adolescents with SpLD [Table 2]

The mean age of the 30 adolescents at the time of interview was 15.7 years ($\pm$ SD, 1.1; range, 13.7 to 17.9 years). The male: female ratio was 1.14:1. Their mean age at the time of diagnosis of SpLD was 12.8 years ($\pm$ SD, 1.8; range, 9.0 to 16.6 years). A large majority (80%) of the adolescents had all 3 types of SpLDs present concomitantly. Before referral to our clinic, 7 (23.3%) had already been detained to repeat a class standard due to failure in their annual school examinations. All 30 adolescents were studying in English-medium schools situated in our city and were in receipt of provisions for their SpLD. There were no significant differences in the clinical and demographic data of adolescent boys with SpLD and those of adolescent girls with SpLD.

Recollections

In response to question 1, 12 (40%) adolescents were neutral, 9 (30%) were positive and 9 (30%) were negative. When asked to mention good experiences about having SpLD, 20 (66.7%) adolescents recalled

Table 2: Clinical and socio-demographic characteristics of 30 adolescents

Characteristics	n (%)
Gender	
Boys	16 (53.3)
Girls	14 (46.7)
Type of SpLD	
SpLD1+2+3	24 (80.0)
SpLD1+2	3 (10.0)
SpLD1+3	1 (3.3)
SpLD2+3	1 (3.3)
SpLD3	1 (3.3)
First born	
Yes	18 (60.0)
No	12 (40.0)
Socioeconomic status	
Upper	7 (23.3)
Upper middle	23 (76.7)
Religion	
Hindu	21 (70.0)
Zoroastrian	4 (13.4)
Christian	3 (10.0)
Muslim	1 (3.3)
Sikh	1 (3.3)
Type of family	
Nuclear	20 (66.7)
Joint	10 (33.3)
Sibling(s)	
Yes	23 (76.7)
No	7 (23.3)
Education board	
Maharashtra state	20 (66.7)
ICSE	9 (30.0)
CBSE	1 (3.3)
Class detainment	
Yes	7 (23.3)
No	23 (76.7)
Remedial education taken	
Yes	21 (70.0)
No	9 (30.0)

SpLD — specific learning disability: type 1=dyslexia, type 2= dysgraphia, type 3=dyscalculia; ICSE=Indian Certificate of Secondary Education; CBSE=Central Board of Secondary Education.

at least one. Five factors were identified: 1 was related to the provisions, 3 were personal and 1 was related to the behavior of classroom teachers [Table 3]. Eighteen (60.0%) adolescents recalled at least 1 bad experience. Ten factors were identified: 5 were personal, 1 was related to behavior of classmates, 2 were related to behavior of classroom teachers and 2 were related to interactions with the community [Table 3].

Table 3: Adolescents' recollections about having SpLD grouped into themes

Recollection	No. of Adolescents (n = 30)
Positive (n = 20)	
1. Provisions	
It was an advantage as I got provisions	14
2. Personal	
I felt fine as I was not segregated from my classmates	2
I felt fine as people with SpLD are not dumb	2
I felt good as people with SpLD are more creative	2
3. Classroom teachers	
Classroom teachers gave me more importance because I had SpLD	2
Negative (n = 18)	
1. Personal	
I felt I was different from my classmates	7
I felt sad that it was detected in me	2
It made me feel small; that I would never achieve anything in life	1
I was forgetful and that created problems	1
I felt guilty because I would speak lies to hide my problem	1
2. Classmates	
Classmates would tease me about it	6
3. Classroom teachers	
Classroom teachers did not really understand what SpLD means	3
Classroom teachers would show pity and feel sorry for me	1
4. Interactions with community	
People treated me as if I was abnormal	2
People said that I had paid money to get the disability certificate	1

Some adolescents reported more than one recollection

When asked to mention good things done by their classroom teachers, 19 (63.3%) adolescents recalled at least one. They reported that the classroom teachers were supportive and encouraged them while teaching in the classroom ($n=19$), made sure that they attended the remedial classes ($n=5$), explained to them that provisions were necessary and beneficial ($n=4$) and made efforts to ensure that they got the provisions ($n=3$). Sixteen (53.3%) adolescents recalled at least 1 bad experience with their classroom teachers. They reported that the classroom teachers would get irritated and insult them in the classroom ($n=7$), did not implement the

provisions properly ($n= 6$), did not understand what SpLD means ($n= 3$), at times beat them ($n= 2$) and would show pity for having SpLD ($n= 1$).

When asked to mention good things done by their classmates, 23 (76.7%) adolescents recalled at least one. They reported that their classmates photocopied the class notes for them ($n= 14$) and helped them in the classroom whenever they needed help ($n= 11$). Twelve (40.0%) adolescents recalled at least 1 bad experience with their classmates. They reported that their classmates teased them about having SpLD ($n= 6$), refused to understand their need for availing provisions ($n= 4$), avoided talking to them ($n= 3$) and bullied them ($n= 3$). Two adolescents said, "My classmates thought that I was dumb in the head"; one said, "My classmates would laugh when I asked them about certain spellings"; and one said, "My classmates confused my problem with having epilepsy."

When the 21 adolescents who had undergone remedial education were asked to mention good things about it, 10 (47.6%) recalled at least one. All 10 adolescents said, "Remedial education was enjoyable and it helped improve my spellings and reading and writing abilities"; and four said, "It helped build up my confidence." Only 6 (28.6%) adolescents recalled at least 1 bad experience about remedial education. Of these, four said, "Remedial education did not help me"; three said, "It was repetitive and a little boring"; and two said, "It was very difficult to commute after school to the remedial classes."

When asked to mention good things done

by their remedial teachers, 13 (61.9%) adolescents recalled at least one. They reported that the remedial teachers made them do and learn different and interesting activities ($n= 13$); were friendly, polite and supportive ($n= 5$); and taught them exercises to improve their concentration abilities ($n= 4$). Four (19.1%) adolescents recalled at least 1 bad experience with their remedial teacher. Of these, two said, "She was boring and taught me what I already knew"; one said, "She would keep on reminding me that I have learning disability"; and one said, "If I did not understand something, she would scold me."

When asked to mention good things about the provisions, 24 (80.0%) adolescents recalled at least one. They reported that availing provisions helped them in getting better marks in their examinations ($n= 21$); reduced their frustrations with studies ($n= 9$); and gave them extra time, which helped in improving their handwriting ($n= 6$). One adolescent said, "Getting provisions was good. My classmates were envious that I got extra time in examinations, and that made me happy." Eight (26.7%) adolescents recalled at least 1 bad experience related to provisions. Six adolescents said, "My success in examinations was attributed entirely to the provisions and not to my hard work"; two said, "I was embarrassed that I needed provisions"; and two said, "Because I got provisions, some of my classmates got jealous and behaved badly with me."

When asked to mention good things done by their parents, 28 (93.3%) adolescents recalled at least one. They reported that their parents were supportive ($n= 11$); sat with them and

helped them in their studies ($n=7$); made sure that they attended the remedial classes ($n=5$); encouraged them to read newspapers, write letters and read books to improve their vocabulary and spellings ($n=4$); explained that provisions were necessary and beneficial ($n=4$); and met the school authorities repeatedly to ensure that they got the provisions in school ($n=3$). Ten (33.3%) adolescents recalled at least 1 bad experience with their parents, of which eight said, "My parents did not care to understand my problem and believed that I didn't study enough"; four said, "My parents did not really approve of me availing provisions"; three said, "My father would beat me if I got poor marks"; one adolescent boy said, "They used to make unfavorable comparisons with the better students in my class"; one adolescent girl said, "They tried to hide the diagnosis from me"; and one adolescent boy said, "My mother would constantly worry about my future and upset me."

When the 23 adolescents who had siblings were asked to mention good things done by them, 8 (34.8%) recalled at least one. They reported that their siblings would help them in their studies ($n=8$); and one adolescent girl said, "My elder brother encouraged me to aim higher than what I thought I could achieve." Only 4 (17.4%) adolescents recalled at least 1 bad experience with their siblings. They recalled that their sibling(s) would taunt them about having SpLD ($n=2$); refused to believe the diagnosis ($n=1$); and one adolescent girl said that her sister ridiculed her even when she scored good marks in an examination by saying, "The so-called good marks are only because of the provisions."

Twenty (66.7%) adolescents mentioned that they would like to have changes in their school to help students with SpLD [Table 4].

In response to question 19, 23 (76.7%) adolescents were positive about their future, and said, "I will achieve my goal in life." Four (13.3%) were neutral about their future, and said, "I do not think about my future." Only 3 (10.0%) were negative about their future, of which one said, "I don't want to study any more"; one said, "People will discriminate against me because of my disability"; and one said, "The provisions will not be there in a job, so I will not be able to do any job."

Seventeen (56.7%) adolescents wanted to pursue education in a professional course such as hotel management ($n=17$) or business management ($n=17$) or engineering ($n=3$) or computer sciences ($n=1$). Four (13.3%) wanted to graduate in the arts stream of education. Four (13.3%) adolescents said, "Any course which will help me stand on my own feet"; and 1 (3.3%) adolescent said, "I want to become an

Table 4: Changes that the adolescents would like in their school

<i>Change Desired in School</i>	<i>No. of Adolescents (n = 20)</i>
1. More leniency in evaluation of examination papers	10
2. More work experience subjects made available as choices	7
3. Classroom teachers should educate classmates about SpLD	6
4. Classroom teachers should be better informed about SpLD	4
5. Need for provisions should be better explained to parents	2
6. Remedial education made available in school itself	2
7. Work experience subjects should actually have some utility	1

Some adolescents desired more than one change

actor.” Remaining 4 (13.3%) adolescents had not given any thought to their career.

Lastly, there were no significant differences in the recollections of adolescent boys with SpLD and those of adolescent girls with SpLD with regard to any of the questions asked during the semi-structured interview.

DISCUSSION

To the best of our knowledge, this is the first study from India which has analyzed the recollections of adolescents with SpLD. The present study has documented that many (40%) adolescents had ‘overall’ neutral recollections of having SpLD during their schooling. Probably young students, due to their innate innocence, are less judgmental and more accepting of their situation. Their positive recollections about having SpLD were mainly related to getting the benefit of availing provisions; and their negative recollections were mainly related to a) personal factors, such as ‘feeling different’ from their classmates or ‘feeling sad’ about having the disability; b) being teased by their classmates about their disability; and c) their classroom teachers lacking understanding of their disability.

When asked specifically about their classroom teachers, they appreciated their classroom teachers who supported and encouraged them, who ensured that they attended remedial classes, who explained to them the importance of provisions and who implemented the provisions properly. However, they also expressed their dissatisfaction about those classroom teachers who insulted or beat them, who did not implement the provisions

properly and who lacked understanding of their disability. It is known that students with SpLD, because of their educational difficulties, experience higher levels of stress at school in interactions with their classroom teachers, causing emotional (fear, shyness and loneliness) and physiological (nausea, tremors or rapid heart beat) manifestations.^[9] Our results emphasize that classroom teachers should be very thoughtful and considerate when dealing with students with SpLD as their behavior can deeply impact them. The adolescents appreciated their classmates who photocopied the class notes for them; but expressed their dissatisfaction about those who teased them about their disability, who refused to understand their need for provisions, who bullied them and who treated them as outcasts. It is known that up to 75% of students with SpLD have social difficulties, originating out of their information-processing deficits, and are at a greater risk for developing poor interpersonal relationships.^[10,11] Their social deficits make them vulnerable to experiencing social rejection by their non-disabled classmates, resulting in loss of self-esteem and an increasing sense of inadequacy.^[11-13] Students with SpLD are more likely to feel lonely and different among peers and get teased or bullied by them.^[14-16]

The adolescents appreciated that remedial education was enjoyable, beneficial in improving their academic competence and in boosting their confidence. However, some other adolescents who were already in secondary school when their disability was diagnosed stated that remedial education did not benefit them and was boring. It is known that because of the central nervous system’s higher plasticity in early years, remedial education should

be started before the age of 10 years to achieve maximal benefit.^[1,2,17,18] It is also known that older students in the more time-demanding setting of secondary school may not want to attend, or have the patience to earnestly participate in, the remedial sessions as they find the structured training exercises to be too simple and basic for their age.^[1,2] The adolescents appreciated their remedial teachers who made the sessions both novel and interesting; however, some others found these teachers to be boring, insensitive or impatient.

Availing the benefit of provisions has been shown earlier to significantly improve the academic performance of adolescents with SpLD.^[19] In the present study, adolescents with SpLD acknowledged that availing provisions not only helped them score better marks in examinations but also helped reduce their academic frustrations. However, some adolescents resented provisions as availing them led to their hard work getting totally ignored and to their classmates behaving badly with them.

The adolescents remembered their parents being supportive, explaining them the importance of provisions and ensuring that they got implemented in school. However, some adolescents recalled their parents being uncaring, disapproving their availing provisions, beating them and making unfavorable comparisons. Few adolescents had positive or negative recollections of their siblings. Some appreciated their siblings helping them in studies, while others recalled being teased by them. Majority (76.7%) of the adolescents had a positive attitude towards their future

prospects in life, and many (56.7%) wanted to pursue education in a professional course.

Practical implications of the study

What is the utility of the present study? The results of the present study highlight the following aspects: First, there is a need to improve the knowledge of classroom teachers, parents and the general public about SpLD. It is well known that up to 5% to 10% of students have SpLD and that supportive school and home environments favorably determine the outcome.^[1,2] Hence all aspiring teachers should be taught in depth about SpLD (its meaning, how to suspect it when the student is in primary school, the importance of remedial education and the rationale for provisions) during their B.Ed. course. McDonnell *et al.* have used the metaphor of a corrective lens to explain that provisions are intended to function as corrective lens that will deflect the distorted array of observed marks back to where they provide a more valid image of the academic performances of students with SpLD.^[20] Second, classroom teachers should educate the non-learning-disabled classmates about the disability so that their misconceptions are reduced, helping them to cast away, especially, their jealousy about the provisions. Third, students with SpLD should undergo regular counseling sessions to prevent feelings of alienation, self-loathing and despair. Fourth, at present the facility of remedial education is still not available in many schools.^[21] Remedial classes should be made available in the school itself as many parents are unable to afford the services of remedial teachers working in the private sector or find it difficult to accompany their offspring to the remedial classes. Fifth, although a wide range of 'alternative work

experience subjects' (39 such subjects) have been recommended (for example, hand embroidery, food preservation, introduction to computer, drawing and painting, beautification, typewriting, book binding, Indian music (vocal and instrumental), screen printing and sticker making, textiles, carpentry, etc.), at present in most schools, students with SpLD are offered a very limited choice, viz., 'only 2 or 3 alternative work experience subjects.'^[2,19] Schools should make extra efforts to offer many more of the recommended work experience subjects so that these students can choose the work experience subject(s) which they like and consider useful for their future. Sixth, school counselors should similarly educate parents and siblings so that students with SpLD have a supportive home environment.

Limitations of the study

Our study has at least 3 limitations. First, recollections were documented with the parents waiting outside. It is possible that some adolescents might have felt inhibited to speak about their very personal 'negative' experiences, especially those related to their home life. Second, the present study has not documented recollections of adolescents with comorbid ADHD. It is known that up to 20% of students with SpLD have ADHD as comorbidity and that these students have 'more severe' learning problems and are 'more prone' to developing behavioral problems.^[1,2,22-24] Third, adolescents from the lower socioeconomic strata of society were not present in our study population. In our city, many students with SpLD from lower socioeconomic strata of society study in poor-quality schools and go undetected because the school authorities lack awareness of SpLD.^[2,21]

However, we do not believe that these limitations adversely affect the utility of our results. Both due to the limitations as outlined above and the general paucity of data, there is a need for further study of this topic. Future research should address these questions: Does socioeconomic status of students with SpLD influence their schooling experience? Does presence of ADHD as comorbidity influence their schooling experience adversely? What are the recollections of adolescents who were diagnosed with SpLD at a much younger age, namely, when they were in primary school? Do adolescents with SpLD develop long-term memories which affect them psychologically in their adult life?

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