A COMPARATIVE STUDY OF THE PERSONALITY CHARACTERISTICS OF PRIMARY-SCHOOL STUDENTS WITH LEARNING DISABILITIES AND THEIR NONLEARNING DISABLED PEERS

Gitanjali Sharma

Abstract. **This study examined the personality characteristics of 180 boys and girls of ages 8, 9, and 10 with learning disabilities (LD) in 3rd, 4th, and 5th grade in urban and rural primary schools of Andhrapradesh, India. The subjects were identified based on their scholastic achievement on a spelling dictation test, an oral reading test, a reading comprehension test and an arithmetic test developed specifically for the purpose, along with mental ability tests – Raven's Standard Progressive Matrices and Draw-A-Man. An adapted version of the Children's Personality Questionnaire (CPQ) was administered to the subjects with LD and a comparison group of children without learning disabilities (NLD). Examination of scores obtained by LD and NLD subjects on the CPQ portrays the LD child as having problems in social and emotional adjustment. Further, the older LD children tended to show a more maladaptive behavioral disposition than the younger, and there was a significant gender effect among LD children.**

GITANJALI SHARMA, Ph.D., is a consulting psychologist, Chennai, India.

Children, the most precious asset of any nation, deserve the best care that mankind can offer. Opportunities must be provided to foster the fullest development of their potential. Recognition of individual differences in every aspect of human life has led to the development of various special education measures to address the needs of pupils with disabilities (e.g., visual, auditory, physical disabilities), but less emphasis has been placed on their scholastic achievement. In India, special education is mostly geared to assist individuals with disabilities in helping themselves with various day-to-day life activities. Despite enormous efforts on the part of the government to distinguish children with disabilities from their typically developing peers and provide them with special education, their educational outcomes, assessed mostly in terms of school achievement, are not encouraging.

Scholastic attainment is not always directly and proportionately related to one's potential. Even among children who do not have physical or mental disabilities, various noncognitive factors play a role in the process of learning. For example, grade retention and dropping out of school can have negative effects, and until such factors have been thoroughly addressed, it is highly ambitious to expect improved outcomes.

In India, pupils in the elementary classes of schools in Andhrapradesh (one of the states in India) are not detained for academic failure. Thus, until the seventh grade, annual promotion is based merely on school attendance. As a result, children's academic problems go mostly unnoticed or are ignored until the seventh grade. In later academic grades students are evaluated only on their academic performance, resulting in serious problems of grade retention and dropping out of school. It is not surprising, therefore, to find some of the pupils in the fifth grade performing at the second- or third-grade level. Consequently, as a first step in implementing an educational intervention program, it is necessary to identify the actual abilities of the pupil.

Every classroom in this area has an alarming proportion of nonachieving students. An examination of the reasons for pupils' lack of achievement reveals incidences of slow learning, learning disorders, learning difficulties, learning disabilities, and so on, which may go unnoticed in the name of low or underachievement, negligence, or poor student motivation. This situation reflects teachers' unawareness of the cause of their pupils' lack of performance and academic progress. Students may have normal intelligence but may have emotional disturbance, be socially or culturally disadvantaged, or have learning disabilities. These students must be given due recognition to overcome their disability.

Many definitions of the term "learning disabilities" have appeared in the professional literature over the years. An examination of these definitions reveals the existence of two distinct approaches: the cause-oriented and the effect-oriented. Those who look at learning disorders from the first perspective attempt to identify the source or etiology of observed behaviors. Those who take the second approach are primarily concerned with behaviors regardless of the underlying causes. Clinicians generally prefer the etiological description whereas school personnel favor terms associated with school learning abilities (Frierson & Barbe, 1967).

According to the cause-oriented definition of Clements (1966), children with learning disabilities are also known as having "minimal brain dysfunction syndrome." This refers to children of near-average, average, or above-average general intelligence with certain learning or behavioral disabilities, ranging from mild to severe, that are associated with a deviation in the functioning of the central nervous system. Such deviations may manifest themselves by various combinations of impairments in perception, conceptualization, language, memory, and control of attention, impulse, or motor function.

On the other hand, the effect-oriented theorists stress educationally significant factors. For example, Bateman's (1965) definition insists on the "principle of disparity" and disorders in the basic learning processes. In her view, children with specific learning disabilities manifest an educationally significant discrepancy between their estimated intellectual potential and actual level of performance stemming from basic disorders in the learning processes that may or may not be accompanied by demonstrable central nervous system dysfunction and that are not secondary to generalized mental retardation, educational and cultural deprivation, severe emotional disturbances, and sensory loss.

Offering additional definitions, organizations such as the Council for Exceptional Children (CEC), the American Psychological Association (APA), and the American Medical Association (AMA) base their definitions on the focus of their respective organizations. The continuing difficulty in coming to terms with a definition of learning disabilities was settled with the adoption of the definition of the National Advisory Committee on Handicapped Children (1968), which states that children with specific learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling or arithmetic. They include conditions that have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, and so on. They do not include learning problems that are due primarily to visual, hearing, or motor handicaps, mental retardation, emotional disturbance or environmental deprivation.

Children with learning disabilities may be found in nearly every classroom in India, including those serving the most advantaged urban and suburban areas. There are many children who do not do well in schools. They may have difficulty in learning, but not all have a true learning disability. Recognizing the students who do have learning disabilities is a challenging endeavor.

To date, no major attention has been given to this dynamic field in India. The Indian educational system is plagued with the twin problems of pupils dropping out or being retained in the same grade without promotion, if they have poor academic performance. Little or no attempt is made on the part of educators to identify the causative factors of student dropouts and grade retention. Systematic efforts in this area would have brought to light a variety of factors that may be responsible for the phenomenal waste in man-years

Table 1
Sample Distribution of LD and NLD Subjects

Grade/level	Age	Gender	LD	NLD
3	8yrs	Boys	30	30
3	8yrs	Girls	30	30
4	9yrs	Boys	30	30
4	9yrs	Girls	30	30
5	10yrs	Boys	30	30
5	10yrs	Girls	30	30

and national finances that a developing country like India can hardly afford.

The National Policy on Education and Program of Action in 1986 prompted India to stress the need for equal opportunity for individuals with disabilities. As a result, instructional material was developed by Project Integrated Education (PIED) for students with disabilities. This was the first time that education for students with disabilities was recognized as a human resource activity rather than a mere welfare activity. However, learning disabilities were not included in the centrally sponsored plan for integrated education for students with disabilities. This reflects the extent to which learning disabilities are not recognized on an equal footing with other types of disabilities.

This may be because of educators' unawareness or underestimation of the magnitude of the problem. Perhaps a lack of approximate estimates of the incidence or prevalence of learning disabilities in schools is keeping educators in the dark. Regardless, the situation indicates an urgent need to initiate systematic nationwide efforts. Keeping in mind the very limited or negligible amount of research that is conducted in India in this area, a modest attempt was made in the present study to identify children with learning disabilities (LD) and compare their personality characteristics to those of their nonlearning disabled (NLD) counterparts.

Objectives of the Study

The study was guided by the following three objectives:

- To examine the differences in the personality characteristics of children with learning disabilities (LD) and nonlearning disabled children (NLD).
- To identify the differences in the personality characteristics related to gender (boys and girls) among children with LD.
- To assess the differences in the personality characteristics of older and younger children with LD.

METHODS

Sample

The sample was drawn in three stages. In the first stage, 25 schools were randomly selected from various urban and rural elementary schools in and around the four district headquarters of Rayalaseema (a regional zone of Andhrapradesh state in India). In the second stage, a group of 45 boys and 45 girls (15 boys and 15 girls from each class) were selected randomly from the attendance registers of third, fourth and fifth grade of each school selected. Thus, the general sample was comprised of 2,250 pupils (1,125 boys and 1,125 girls). In the third stage, the entire sample of students was subjected to psychological testing in order to identify the children with learning disabilities.

Results indicated that out of the 2,250 subjects, 204 had learning disabilities. Further examination to determine the presence of minimal brain dysfunction reduced the number to 198. The children were also checked for any physical disabilities (visual, hearing and speech) with the help of trained medical practitioners. Students with such disabilities were excluded from the final sample.

For ease of statistical analysis, a selective sample of 90 LD boys and 90 LD girls (30 LD subjects from each group) in grades 3, 4, and 5 were selected randomly for the experimental group. An equal number of pupils

with no learning disabilities (NLD) and of similar mental ability were randomly selected to constitute the control group (see Table 1).

Instruments

The definition of learning disabilities requires an estimation of students' levels of (a) scholastic performance and (b) mental ability.

To determine scholastic achievement, a spelling dictation test, an oral reading test, a reading comprehension test and an arithmetic achievement test (Sharma, 1992) were specifically developed in the absence of standardized achievement tests suitable for use with pupils in grades 3, 4, and 5, since learning disabilities may take various forms, such as disability in writing, reading and arithmetic.

It was supposed that as standardized achievement and intelligence tests are mostly verbal in nature, children with good verbal facility would be at an unfair advantage compared to those with poor verbal skills (oral and written). Therefore, it was felt to be more appropriate to use nonverbal tests of mental ability. Two nonverbal tests of mental ability, the Standard Progressive Matrices (Raven, 1952) and Draw-A-Man (Phatak, 1966), were used.

Bateman's (1965) definition of LD implies that learning disabilities may or may not be accompanied by demonstrable central nervous system dysfunction. It was decided to have a homogeneous sample of children with LD without minimal brain dysfunction (MBD). To check the incidence of MBD, if any, among the sample, the Bender Gestalt Test (Bender, 1938) and Benton's Visual Retention test (Benton, 1955) were administered.

The Children's Personality Questionnaire (CPQ) developed by Porter and Cattell (1972) was designed to give maximum information in the shortest time about the greatest number of dimensions (14) of personality that have potential importance in clinical, educational and counseling practice. The results facilitate precise and quantitative evaluation of how a child's personality contributes to his/her performance in school and social adjustment inside and outside the classroom. Thus, based on these 14 scores, individually and in combination, one can obtain predictions of school achievement, especially underachievement, tendency toward delinquency, likelihood of leadership potential, possible need for clinical help to avoid excessive emotional disturbance, and so forth.

An adapted version (Siddamma, 1977) of the CPQ test form A was selected for use with the children in the main sample to assess personality characteristics. Children were tested in small groups according to the procedures prescribed in the test manual. Independent scores for each factor were obtained using the scoring key.

Out of the 14 factors, 8 were found to have dependability coefficients of 0.7 and above. By comparison, only four factors were reported to have reliability coefficients of 0.70 and above by the authors of the CPQ. It may therefore be concluded that the test demonstrated the necessary reliability and could be used to measure the personality characteristics of the children in this study.

Procedure

Group testing was used in several sessions to administer an adapted version of the CPQ in the school setting with prior permission from the school administration. As all the subjects in both groups were very young and new to this type of psychological testing, personal care was taken to make them feel free and unrestrained in their responses. Clear instructions were repeatedly given to avoid any confusion or doubt as to what they were expected to do. Each testing session was comprised of a small group of 3-5 children.

RESULTS AND DISCUSSION

The data were analyzed using ANOVAs and *t* tests. Stating the objectives as hypotheses, the results will be discussed for each of the study objectives.

Hypothesis 1

1. *There are significant differences between the learning disabled (LD) and the nonlearning disabled (NLD) children on certain personality factors.*

In order to test the above hypothesis, scores obtained by the LD and the NLD subjects on the CPQ were tested for significance of difference in their mean scores on each factor (see Table 2).

Results showed that the LD children obtained significantly lower scores on Factors A, C, D, F, H, and Q3 than the NLD students. The higher scores on Factor A show an outgoing and cyclothymic disposition (high and low mood swings) in contrast to the low-scoring LD subjects. Low scores for the LD children on Factor C indicate that they have a low frustration tolerance, are easily changeable and highly emotional, and have neurotic tendencies in contrast to their NLD counterparts. Analysis of the scores on Factor D suggests that the LD children were relatively more phlegmatic than their NLD peers. The significantly higher scores obtained on Factor F by the NLD subjects imply their more happy-go-lucky, enthusiastic, optimistic and self-confident disposition compared to their low-scoring LD counterparts. Further, the high scores obtained by the NLD subjects on Factor H show that they are more venturesome and socially bold than the LD children. Finally, the NLD students' high scores on Factor Q3 indicate that they are more controlled, exacting, have greater willpower, are socially precise and have a good self-image.

Table 2

Means, SDs and t Values for Scores on the Children Personality Questionnaire (CPQ)

FACTORS	A		B		C		D		E		F		G	
GROUPS *N* = 180	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
LD	1.49	0.74	3.15	0.36	1.58	0.68	1.42	0.66	2.00	0.60	1.46	0.63	1.58	0.61
NLD	2.85	1.03	3.24	0.54	2.17	0.83	2.20	0.84	2.1	0.63	1.95	0.78	2.17	0.60
t	14.39**		1.86*		7.38**		9.78**		1.54*		6.55**		1.57*	

FACTORS	H		I		J		N		O		Q3		Q4	
GROUPS *N* = 180	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
LD	1.13	0.34	1.36	0.52	1.81	0.68	1.45	0.76	1.72	0.81	1.39	0.65	1.93	1.00
NLD	1.13	0.34	1.36	0.52	1.81	0.68	1.46	0.87	1.73	1.13	2.33	0.97	1.80	0.88
t	17.39**		0.18*		0.14*		0.77*		0.09*		10.80**		0.09*	

*Nonsignificant; **Significant at 0.01 level.

Table 3
ANOVA for Scores on Factor A

Source of variation	*SS*	*df*	*MSS*	*F*
A	4.48	2	2.24	4.14**
B	0.05	1	0.05	0.09*
AXB	0.23	2	0.11	0.20*
Within SS	94.24	174	0.54	
Total	99.00	179		

*Not significant; **Significant at 0.05 level.

Thus, an examination of the scores obtained by the LD and the NLD subjects on the CPQ portrays the LD child as one who has problems with social and emotional adjustment. Further, the LD child appears to be more schizothyme (showing behavioral patterns such as emotional aloofness, sensitivity, fearfulness, inability to socialize well with others and a tendency to daydream), rigid, phlegmatic, and pessimistic than the NLD.

From the analysis of data and the results obtained, it could be concluded that there are significant differences between the LD and the NLD children in certain personality factors. Thus, the findings of the study warrant acceptance of Hypothesis 1: that is, there are significant differences between LD and NLD children in certain personality factors.

Hypothesis 2 and 3

2. ***There are gender differences in the personality characteristics of the LD children.***

3. ***There are age differences in the personality characteristics of LD children.***

To examine Hypothesis 2 and 3, the scores obtained by the LD subjects on the CPQ were analyzed factor-wise using a 2 (Gender) X 3 (Age Level; grades 3, 4, and 5) factorial design. The results are shown in Tables 3 to16.

The results shown in Table 3 suggest significant differences on Factor A among the three age levels (*F*= 4.14; significant at the 0.05 level).

The scores were further examined for the significance of differences in the mean scores indicated by the significant *F* ratio. As illustrated in Table 3a, the 10-year-old LD children were comparatively more detached, cool, and schizothyme than the younger groups (*t*=8-9 yrs, 2.13; 8-10 yrs, 3.22; significant at the 0.05 and 0.01 level, respectively; 9-10 yrs, 0.05; not significant). However, gender differences were not found to significantly influence the scores on Factor A (*F*= 0.09; not significant).

Analysis of scores obtained on Factor B using an ANOVA indicates a significant influence of age (*F*=3.41; significant at 0.05 level). However, the effect of gender was not significant (see Table 4). The results shown in Table 4a indicate that the 9- and 10-year-old LD children were more alert, quick to grasp ideas, and intelligent than the youngest group (*F*= 8-9 yrs, 1.5; not significant; 8-10 yrs, 2.42; 9-10 yrs, 2.43; both significant at 0.05 level).

Examination of scores obtained on Factors C and D by the LD children using a 2x3 ANOVA showed no significant effect of age and gender, either as main variables or in interaction with each other (see Tables 5 and 6).

Analysis of scores on Factor E in (see Table 7) showed significant effect of gender (*F*=5.28; significant at 0.01 level). Application of *t* tests to the differences in the mean scores of LD boys and girls on Factor E (see Table 7a) showed that the boys were more assertive, independent, aggressive, stubborn, and dominant than the girls. The boys' high scores on this factor might reflect the cultural expectations that, implicitly or sometimes explicitly, encourage boys to assume more active and assertive roles than girls (*t*=3.63; significant at 0.01 level).

The 2x3 ANOVA of the scores on Factors F, H, I, J, N, O, and Q3 do not indicate any significant effect of age and gender, either singly or in interaction with each other (see Tables 8-14).

Results of the ANOVA of scores on Factor G obtained by the LD children indicate a significant influence of

Table 3a

Means, SDs and t Values for Scores on Factor A for the Three Age Groups

Age	*M (N=60)*	*SD*	*t*
8	1.70	0.88	
8-9			2.13**
9	1.47	0.64	
8-10			3.22***
10	1.32	0.39	
9-10			0.05*

*Not significant; **Significant at 0.05 level; ***Significant at 0.01 level.

Table 4

ANOVA for Scores on Factor B

Source of variation	*SS*	*df*	*MSS*	*F*
A	0.83	2	0.41	3.41**
B	0.05	1	0.05	0.41*
AXB	0.30	2	0.11	1.25*
Within SS	21.77	174	0.12	
Total	22.95	179		

*Not significant; **Significant at 0.05 level.

Table 4a

Means, SDs and t Values for Scores on Factor B for the Three Age Groups

Age	*M (N=60)*	*SD*	*t*
8	3.06	0.31	
8-9			1.50*
9	3.15	0.36	
8-10			2.42**
10	3.23	0.45	
9-10			2.43**

*Not significant; **Significant at 0.05 level.

Table 5
ANOVA for Scores on Factor C

Source of variation	*SS*	*df*	*MSS*	*F*
A	0.43	2	0.21	0.47*
B	0.93	1	0.93	2.11*
AXB	0.09	2	1.54	3.50*
Within SS	77.30	174	0.4	
Total	81.75	179		

*Not significant.

Table 6
ANOVA for Scores on Factor D

Source of variation	*SS*	*df*	*MSS*	*F*
A	0.22	2	0.11	0.25*
B	0.01	1	0.01	0.02*
AXB	0.00	2	0.00	0.00*
Within SS	77.84	174	0.44	
Total	78.07	179		

*Not significant.

Table 7
ANOVA for Scores on Factor E

Source of variation	*SS*	*df*	*MSS*	*F*
A	1.70	2	0.85	2.42*
B	1.85	1	1.85	5.28***
AXB	0.48	2	0.24	0.68*
Within SS	61.28	174	0.35	
Total	65.30	179		

*Not significant; ***Significant at 0.01 level.

Table 7a
Means, SDs and t Values for Scores on Factor E by Gender

Gender	*M (N=90)*	*SD*	*t*
Boys	1.45	0.42	
			3.63***
Girls	1.25	0.31	

***Significant at 0.01 level.

Table 8
ANOVA for Scores on Factor F

Source of variation	*SS*	*df*	*MSS*	*F*
A	0.01	2	0.005	0.01*
B	0.00	1	0.000	0.00*
AXB	0.08	2	0.040	0.09*
Within SS	72.64	174	0.41	
Total	72.73	179		

*Not significant.

age (*F*=4.73; significant at 0.01 level). However, the effect of gender and the interaction effect of age and gender was not found to influence the scores to a significant extent (see Table 15).

The *t* values (see Table 15a) indicate significant differences among the LD children in the three age groups (*t*=8-9 yrs, 4.16; 8-10 yrs, 4.16; both significant at 0.01 level; 9-10 yrs, 0.68; not significant). These results imply that the younger children with LD were more conscientious, persevering, and rule-bound than their older counterparts. Perhaps increasing age directly or indirectly makes these children more liable/vulnerable to social and emotional maladjustment. This, in turn, might affect their learning to mark them as having learning disabilities.

Analysis of the scores on Factor Q4 of the LD subjects also indicates a significant influence of age (*F*=3.408; significant at 0.05 level). However, gender and its effect in interaction with age was not found to be significant (see Table 16).

The *t* values shown in Table 16a indicate that 9- and 10-year-old LD children are more relaxed, tranquil, unfrustrated than the other youngest LD children (*t*=8-9 yrs, 2.28; 9-10 yrs, 2.33; 8-10 yrs, 3.70; significant at the 0.05 level and 0.01 level, respectively).

Results from the analysis of the data indicate significant differences among LD boys and girls only on Factor E. That is, the LD boys were found to be more assertive, independent, aggressive, stubborn, and domineering than the LD girls. However, this finding might reflect the effect of gender role expectations of the Indian culture in general, which implicitly or sometimes explicitly encourage boys to assume more active and assertive roles than girls, more than differences in

Table 9
ANOVA for Scores on Factor H

Source of variation	*SS*	*df*	*MSS*	*F*
A	0.13	2	0.06	0.54*
B	0.08	1	0.08	0.72*
AXB	0.05	2	0.02	0.18*
Within SS	19.82	174	0.11	
Total	20.08	179		

*Not significant.

Table 10
ANOVA for Scores on Factor I

Source of variation	*SS*	*df*	*MSS*	*F*
A	0.88	2	0.44	0.89*
B	0.05	1	0.05	0.10*
AXB	0.03	2	0.01	0.20*
Within SS	85.37	174	0.49	
Total	86.33	179		

*Not significant.

Table 11
ANOVA for Scores on Factor J

Source of variation	*SS*	*df*	*MSS*	*F*
A	0.34	2	0.17	0.30*
B	0.00	1	0.00	0.00*
AXB	0.15	2	0.07	0.12*
Within SS	99.04	174	0.56	
Total	99.53	179		

*Not significant.

Table 12
ANOVA for Scores on Factor A

Source of variation	*SS*	*df*	*MSS*	*F*
A	0.02	2	0.01	0.02*
B	0.09	1	0.09	0.21*
AXB	0.07	2	0.03	0.107*
Within SS	71.74	174	0.41	
Total	71.92	179		

*Not significant.

Table 13
ANOVA for Scores on Factor O

Source of variation	*SS*	*df*	*MSS*	*F*
A	0.28	2	0.14	0.25*
B	0.01	1	0.01	0.01*
AXB	0.01	2	0.005	0.009*
Within SS	95.37	174	0.54	
Total	95.67	179		

*Not significant.

Table 14
ANOVA for Scores on Factor Q3

Source of variation	*SS*	*df*	*MSS*	*F*
A	0.81	2	0.90	2.09*
B	0.14	1	0.14	0.32*
AXB	0.08	2	0.04	0.09*
Within SS	74.97	174	0.43	
Total	77.00	179		

*Not significant.

Table 15
ANOVA for Scores on Factor G

Source of variation	*SS*	*df*	*MSS*	*F*
A	3.88	2	1.94	4.73***
B	1.42	1	1.42	3.46**
AXB	0.41	2	0.02	0.48*
Within SS	72.94	174	0.41	
Total	78.65	179		

*Not significant; **Significant at 0.05 level; ***Significant at 0.01 level.

the personality characteristics of boys and girls due to their learning disabilities. Thus, the results of the study warrant rejection of the hypothesis that there are gender differences in the personality characteristics of the LD children.

Further, the older LD children tended to show more maladaptive behavior than the younger LD children; in particular, the 10-year-old LD children were more cool and schizothyme (Factor A), more unruly (Factor G), and more relaxed (Factor Q4) than the younger children. However, on Factor B, the older LD subjects appeared to be more alert and intelligent than the younger children, showing developmental maturity.

The findings suggest that social and emotional maladaptive behavior tends to grow with age. The LD children's frustrating academic failures might have influenced their negative behavior, or their maladaptive tendencies may have a debilitating effect on their academic achievement. Thus, the findings of the study warrant acceptance of Hypothesis 3: that is, there are age differences in the personality characteristics of the LD children.

In summary, analysis of the data suggests significant age differences in the personality factors of the LD children. In terms of educational and practical implications, the study indicates certain maladaptive tendencies in the personality disposition of the LD children in com-

Table 15a
Means, SDs and t Values for Scores on Factor G for the Three Age Groups

Age	*M (N=60)*	*SD*	*t*
8	1.75	0.49	
8-9			4.16***
9	1.46	0.40	
8-10			4.16***
10	1.41	0.40	
9-10			0.68*

*Not significant; ***Significant at 0.01 level.

parison to the NLD peers. Some of these tendencies were found to increase with age, implying that if unchecked at a younger age, they may have remarkably damaging effects in later years. Thus, these findings point to an urgent need to identify children with learning disabilities in India as early as possible.

Research in this area has yet to receive its due recognition in India. The absence of solid research implies an unawareness of learning disabilities as a subject of special importance. As a first order of business for Indian educational and psychological research a nationwide survey should be conducted to determine the population of children with learning disabilities in our schools. This would help us to know the incidence of learning disabilities. It would also lead us in finding a way in the school context to get rid of the two main problems, grade retention and dropping out of school, that are plaguing the Indian educational system. Identification of LD children as a special group would necessitate the development of remedial programs as a next step.

CONCLUSIONS

The data were analyzed using ANOVA and *t* tests. The analysis of the data yielded the conclusion that there were significant differences in certain personality factors between the LD and the NLD children. The LD children were found to be more schizothymic, rigid, and phlegmatic compared to the NLD children. No significant gender differences were found for the

Table 16
ANOVA for Scores on Factor B

Source of variation	*SS*	*df*	*MSS*	*F*
A	2.18	2	1.09	3.40**
B	0.35	1	0.35	1.09*
AXB	0.71	2	0.35	1.09*
Within SS	55.74	174	0.32	
Total	58.98	179		

*Not significant; **Significant at 0.05 level.

Table 16a
Means, SDs and t Values for Scores on Factor Q4 for the Three Age Groups

Age	*M* (*N*=60)	*SD*	*t*
8	1.43	0.52	
8-9			2.28**
9	1.26	0.25	
8-10			3.70***
10	1.16	0.22	
9-10			2.33**

**Significant at 0.05 level; ***Significant at 0.01 level.

personality factors of LD boys and girls, except in Factor E, which might be attributed to gender role expectations of the Indian culture in general. Further, significant age differences were noted for certain personality factors like A, B, G and Q4 of the LD children. The findings suggest that social and emotional maladaptive behavior tends to become more pronounced with age in LD children. Their frustrating academic failures may have influenced their behavior or their maladaptive tendencies may have a debilitating effect on their academic achievements.

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Requests for reprints should be addressed to: Gitanjali Sharma, c/o J. P. Sharma, #105 Broadway, Chennai, 600108, India; gitanjalisharma@rediffmail.com