SUMMARY AND CONCLUSIONS

Children with learning disabilities were reported in literature to be different on certain personality characteristics. Their parents and teachers were also found to have very poor and negative attitudes towards these children. Review of literature quotes a large number of studies to suggest that such attitudes interfere with the performance of the LD children in school setting. Various specific intervention programme designed in the western studies were proved successful in improving the academic performance of children with specific learning disabilities. However, Indian studies in the area are very sporadic. Research in the so far neglected field is yet to gain it's due attention of the Indian psychologists, educationalists and others in the related fields.

At this juncture the present study was envisaged as a modest attempt to examine the difference in the personality characteristics of the learning disabled (LD) and the non-learning disabled (NLD) children, and also to assess the efficiency of intervention programmes developed specifically for parents, teachers and the LD children in improving the academic performance of children with varied learning disabilities.
Thus the study was planned with the following as its main objectives:

1. To identify the children with various learning disabilities viz., reading, writing and arithmetic, in the ages of 8, 9 and 10 years, that is, in the 3rd, 4th and 5th grades,

2. To examine the differences in the personality characteristics of the LD and the NLD children,

3. To assess the attitudes of the parents and the teachers towards their LD children and

4. To study the effect of intervention programmes in remedying the learning disabilities.

In order to realize the afore mentioned objectives the following hypotheses were formulated.

Hypothesis 1: There are significant differences between the learning disabled (LD) and the non-learning disabled (NLD) children in certain personality factors.

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

Hypothesis 3: There are ages differences in the personality characteristics of the LD children.

Hypothesis 4a: There are significances in the parental attitudes of the LD and the NLD children.

Hypothesis 4b: As a result of intervention there are significant differences in the parents pre and post intervention attitudes towards their LD children.

Hypothesis 5a: There are significant differences in the attitudes of the teachers towards their LD and Non-LD pupils.

Hypothesis 5b: As a result of intervention there are significant differences in the teachers pre and post intervention attitudes towards their LD pupils.
Hypothesis 6: As a result of intervention (educational, parental and teachers) there are significant changes in the post interventional Achievement Test performance of the learning disabled children.

Sample:

The general samples of the study consisted of 2250 children in the 3rd, the 4th and the 5th standards/grades of schools selected randomly from various urban and rural localities of the four districts of Rayalaseema, Andhra Pradesh (India). Out of the general sample a group of 204 pupils were identified as learning disabled in reading (72), writing (63) and arithmetic (60). Screening for Minimal Brain Dysfunction (MBD) and physical disabilities limited the size of the sample to a total of 198 subjects. However, for the ease of statistical computations the study was confined to a sample of 180 LD children only.

Materials:

The study necessitates the following:

To identify the children with learning disabilities (writing disability, reading disability and arithmetic disability) needs estimation of the levels of (a) Scholastic performance and (b) mental ability of the subjects. So the tests were used like (a) (1) Spelling Dictation Test (2) Oral Reading Achievement Test (3) Reading Comprehension Test (4) Arithmetic Achievement Test, all specifically developed for the purpose in Telugu. (b) Raven's standard progressive matrices (Raven, 1952) and Draw - A Man Test (Phatak, P, 1966).

In order to check the incidence of Minimal Brain Dysfunction if any, among the identified sample, the Bender-Gestalt Test (Bender, 1938) and the Benton's Visual Retention Test (Benton, 1955) were administered.

An adapted version of Cattell's Children Personality Questionnaire (CPQ), (Siddamma, 1977) was used to assess the personality characteristics of the subjects with LD and NLD.
Next attitudes of the parents and teachers towards their LD and NLD children were assessed using Parental Attitude Questionnaire and Teachers Attitude Questionnaire developed specifically for the purpose.

In order to evaluate the effect of remedial educational intervention on attitudes of the parents towards their LD children, on attitudes of the teachers towards their LD pupils, on the academic performance of children with specific learning disabilities, a different remedial educational programmes were developed specifically for the study (Appendix VII A,B,C,D, a,b,c).

Taking hints from the previous studies, a programme was drawn out to improve the writing skills in Telugu language, the mother tongue of the disabled, starting from the pre-writing skills to primary school level. Kinesethetic Audio visual method to improve perception and a single stimulus (distraction free) method to improve attention span were used. The subjects were motivated through reward and praise in a congenial and tension free atmosphere in the school setting during the school working hours. The programme involved basic exercises like making horizontal lines, curved lines, different patterns like square, triangle etc., by joining the dots; forming certain letters, copying the circle, curved line, a star pattern etc., and completion of the incomplete letters; ordering the given jumbled letters; copying the letters with vowels; copying the letters with consonants; filling the blanks with the missing letters; writing imposition of certain words; reproducing the paragraph thrice without any error etc.

To help the reading disabled pupil correct their errors a programme was chalked out using grapheme-phoneme method. The programme involved basic exercises like Identifying the pictures; naming the picture as per the alphabetic letter sounds in Telugu; spelling out the letters in single and in words; identifying the words as per the letter sounds at the beginning and at the end; joining the similar letters and words; picking up the objects as per the letter sounds; identifying the odd letters and even letters; writing the names of figures in the posters; reading out the sentences shown; listening to the paragraph and answering the posed orally; reading the paragraph and answering questions posed in writing;
filling the blanks with the missing letters and missing words; telling a story, naming the vegetables, flowers, friends etc; naming the things, places etc., telling his daily routine work and the like. The items that were provisionally included in the programme were checked by the class teachers dealing with the Telugu language/classes of the 3rd, 4th and 5th standards for the relevance and suitability of the items for use with the specified sample of subjects.

An intervention programme was planned to help children in these lines. Accordingly a programme was developed for the arithmetic disabled, involving the basic exercises like, identifying the position, i.e., under, below, up, down, of the things; telling the number and size of the things shown; differentiating the larger and bigger things from the smaller ones; identifying the shapes of the figures shown; oral recitation of the numbers from 1 to 100; identifying the positions of the numbers i.e., units, tens, hundreds etc; recognizing the required quantity of the things; identifying the parts of the body and counting the number of eyes, ears, fingers etc., counting the number of circles in the given blanks; drawing the required number of circles as instructed; colouring the circles a instructed; counting the coloured circles; counting the pebbles and placing the required number of pebbles in each bag and counting the left over; counting the beads given in the thread the separating a particular number each time; counting the marbles given and sorting them into various groups with 4 (or) 5 things in each group; sorting the required number of things from a pool of objects etc.

Method:

Individual and group testing methods were used in collecting data required for the study. Data were collected in several sessions.

The first session consisted of administration of Achievement Tests with the prior permission of the school authorities concerned. All the pupils in the III, IV and V classes of several urban and rural schools selected randomly in the 4 districts of Rayalaseema A.P. were first administered Spelling Dictation Test, followed by Oral Reading Achievement Test, Reading Comprehension Test,
Arithmetic Achievement Test in that order on different days, separately for each grade. Each testing session had a small group of 7 to 10 children.

In the second session Raven's standard progressive matrices (RPM) and Pramila Phatak's Draw A Man Tests (DAM) were administered on two different days to the subjects in small groups (8-10) to assess their non-verbal mental ability.

In the third session the BGT and the BVRT were administered individually on 2 separate days for all the 204 children identified with various learning disabilities.

In the fourth session an experimental and a control group were formed. For the ease of statistical analysis thirty LD subjects from each group were selected randomly for the experimental group and an equal number of normal children were randomly included in the control group. Thus, there were 180 subjects in each group. Both the experimental and control groups were administered (in their school setting) an adapted version of Cattell's Children Personality Questionnaire (CPQ). Each testing session comprised of a small group of 3-5 children.

The fifth session consisted of assessing the attitudes of the parents and teachers of the LD and the Non-LD children. Parents of the LD and the Non-LD children were contacted individually at their home environs and their co-operation was ensured with a good rapport established. Next they were requested to respond to the Parental Attitude Questionnaire at their chosen time of convenience. The response of parents were recorded verbatim. Most of the participants in the interview were mothers and their response were recorded.

Each class teacher of the respective classes of various schools was given a list of the LD and the Non-LD children present in their classes (without notifying them that some children in the list were identified as LD children) with a request to mark their attitudes towards each of these children separately in the
Teachers Attitudes Questionnaire. Mostly each list contained one or two LD children and an equal number of NLD children. Thus each teacher was to fill in 2-4 questionnaires keeping particular child in view every time he or she answered the questionnaire.

The sixth session comprised of implementation of intervention programmes for specific groups of parents and teachers of the LD children, and educational intervention programmes for the LD children. A matched group design was planned to implement educational intervention programmes. The subjects matched for their scores on mental ability and Achievement Tests were divided into 5 groups. Each group consisted of 18 boys and 18 girls (36) with 6 boys and 6 girls (12) from each class level and 2 boys and 2 girls in each type of learning disabilities. There were 1 or 2 subjects in each group with disabilities in two or three areas.

Next, subjects in the group I were given educational intervention and their parents and teachers received education. Group II received educational intervention and their parents alone were given education. Group III received educational intervention and their teachers alone were given education. Group IV received educational intervention only. Vth Group of pupils, their parents and teachers were not exposed to any intervention programmes.

As the level of achievement of the learning disabled children in the respective areas was found to be basically poor and homogeneous, all the 3rd, 4th and 5th graders were started with the same educational intervention programme. Each subject received individual instruction by the investigator everyday for one hour in the respective area of disability. The programme lasted for 6 weeks i.e., requiring 30 sessions for each child. The children were given exhaustive drilling in the area concerned. Intervention programmes for the children, their parents and teachers were all started at a time.

The children were given training in a class-room specially allotted for the purpose by the respective school authorities. The subjects were spread over
several schools. Everyday each child was given special instruction for one hour. Thus for 4 hours 4 children from each school were given individual training in their respective areas. The entire programme lasted for approximately 10 months.

72 parents of the children in Group I and II were met individually and in 5 or 6 sessions and they were educated and made sensitive to the physical, emotional, social and cognitive needs of the children, good child rearing practices to dispel several of the unidentified social and emotional insecurities felt by children and affecting their achievement at school. Each session lasted for one hour.

A total of 42 teachers of the subjects in group I and III were also met in small groups of 2 or 3 teachers at a time for 30 to 45 minutes at their convenience in 4 to 6 sessions. In each session the teachers co-operation was sought to be sensitive to the physical and psychological needs of the children, to understand and help them with their liabilities, appreciate their strengths and encourage them to take efforts to overcome their disabilities in their close supervision. During these meetings several doubts of teachers in the management of LD children were clarified.

In the seventh and the last session, all the parents (N=72) and teachers (N-42) were tested using the respective Attitudinal Questionnaires, used previously to evaluate the efficiency of intervention programme in bringing about attitudinal changes towards their learning disabled wards. The same Achievement Tests that were used in pre-test were used to post-test the disabled children to evaluate the efficiency of the educational intervention programme in mainstreaming the children by overcoming their disabilities in the three different areas.

Data collected were analyzed using ANOVA, 't' tests and Duncan's Range Test. Analysis of data yielded the following conclusions:
1. There are significant differences in certain personality factors of the LD and the NLD children.

   The LD children were found to be schizoidlymic, rigid, phlegmatic and withdrawn in their personality disposition compared to the NLD children.

2. There are no significant gender differences in the personality factors of LD boys and girls, except in Factors E, which might be attributed to gender role expectations of the culture in general.

3. There are significant age differences in certain personality factors like A, B, G and Q4 of learning disabled children.

4a. The parental attitudes of learning disabled children were found to be negative in contrast to those of NLD's parents.

4b. As a result of intervention, there were significant positive changes in the post-intervention attitudes of the parents.

5a. The teachers were found to have poor or negative attitudes towards their LD pupils in comparison to NLD pupils.

5b. As a result of intervention there were significant positive changes in the post intervention attitudes of teachers towards their LD pupils.

6. As a result of combined educational, parental and teacher intervention there were in the significant improvements in the post-intervention Achievement Test performance of the LD children.