

A COMPARATIVE STUDY OF THE EFFICACY
OF GROUP THERAPY AND REMEDIAL
READING WITH RETARDED
READERS

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requirements for the degree of Master of Science
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CONTENTS

	<u>Page</u>
Summary paper	i.
Introduction	1
Method	65
Results	127
Discussion	143
Bibliography	159
Appendices	
Appendix A	183
Appendix B	201
Appendix C	219

S U M M A R Y P A P E R

59 Selected White English-speaking children referred to a clinic for reading failure were randomly assigned to a remedial reading, therapy and control group. The groups were matched on sex, CA, IQ and RA. Subjects in the Experimental groups were exposed to 2 different methods of treatment, twice a week over 4 months. Therapist effect was spread over both treatment groups. The Control group received 'no treatment'.

The NEALE, JEPI, CPQ and ROGERS were administered at the beginning and end of the experimental period. Pre/post test difference scores were used as measures of change in reading attainment, personality and adjustment.

Although no difference was shown between the remedial reading and therapy groups, both showed significant gains in RA over the control group. No measurable change was shown in personality and adjustment measures. Therapist effect was shown to vary significantly.

A review of the literature shows that the relationship between children's emotional difficulties, social and personal adjustment, their attitudes toward school and reading and the effect that these have on reading attainment, have been investigated and discussed for many years (Chazan, 1967; Pumfrey and Elliott, 1970; Rutter, Tizard and Whitmore, 1970; Sampson, 1966). Whilst it is generally agreed that there is a significant relationship, writers have not agreed on whether maladjustment is a cause, an effect, or merely a concomitant of failure to acquire reading skills.

Traditional remedial reading teaching has been shown to have small and short-lived effects (Carroll, 1972). An alternative to this approach in the treatment of reading difficulties has therefore been by using procedures aimed at attempting to improve the child's behavioural and emotional difficulties, thereby effecting a change in his approach to learning situations at school in a way that will be more adequate and effective, with a resultant amelioration of reading skills (Bills, 1950; Lawrence, 1971 and 1972; Lawrence and Blagg, 1974).

The nature and remediation of reading difficulties has presented a challenge to many different disciplines and generated a great deal of research. Despite this, evidence is still limited when considering the most effective approach to remedial procedures aimed at improving reading skills. Studies in this field are difficult to assess because they fail to meet many of the requirements of adequate experimental design, for example, inadequate sample size, properly matched control groups, inadequate controls for important variables such as the effect of the therapist. Nevertheless, there are indications that a 'therapy' type of approach may be more effective than the traditional remedial reading approach in improving reading attainment (Lawrence, 1971).

Many authors (Pumfrey and Elliott, 1970; Sampson, 1966; Rutter, Tizard and Whitmore, 1970; Vernon, 1963; Yule, 1973) have stressed the need for further research in evaluating different approaches that attempt to help the retarded reader, research which will meet the requirements of adequate experimental design (Carroll, 1972; Pumfrey and Elliott, 1970).

It seemed therefore, that a study evaluating the relative

efficacy of a group therapy and a remedial reading approach with retarded readers, would be valuable, a study which would attempt to meet the requirements of adequate experimental design. As the therapist variable may be one of the largest sources of variance in the results of studies of this nature (Pumfrey and Elliott, 1970), the effect of the therapist was specifically controlled and investigated.

The aim of the present study was therefore to evaluate the relative efficacy on reading attainment, personality and adjustment of a group therapy approach, compared with the results obtained by a traditional remedial reading approach with retarded readers. Additionally, to consider the effects on reading attainment, personality and adjustment, irrespective of the treatment approach, of two different therapists. The general hypothesis being investigated was that it would be possible to improve the child's personal and social adjustment and attitudes to reading and school, thereby effecting a change in his approach to learning situations, with a resultant improvement in reading attainment. Furthermore, that there would be a difference in the improvement of the children, between the two therapists' groups.

METHOD

Subjects

The subjects were 59 White, English-speaking children, who were selected from a waiting list of children referred to the Child Guidance Clinic of the University of Cape Town. They had been referred by teachers for scholastic failure associated with reading problems. Thirteen of the children were girls and they represented a White middle-class population.

Criteria for Selection

- (1) That the full scale IQ score should be 85 or over so as to exclude mental subnormality.
- (2) The children were to be between the ages of 7 and 12.
- (3) A reading achievement quotient (RAQ) was to be 90 or below. Although the reading achievement quotient has been subjected to statistical objections which stem from the 'regression effect' (for example, Crane, 1959; Ravenette, 1961; Yule, Rutter, Berger and Thompson, 1974), these objections apply in the main towards its use in the detection of retarded readers, whereas in this study, it was used as a technique in the control of variables. The reading quotient was calculated by the following method. The $\bar{X}$ of the Accuracy and Comprehension scores on the Neale Analysis of Reading Ability (NEALE) = RA (reading age). MA (mental age) is calculated from the full scale IQ scores.

$$\text{Reading Achievement Quotient RAQ} = \frac{RA}{MA} \times \frac{100}{1}$$

The RAQ of 90 or less as a criterion was decided upon arbitrarily after taking into account the standard deviation of the group 7 - 11 years used for the standardization of the NEALE.

- (4) Intact senses in terms of adequate auditory and visual acuity.
- (5) Freedom from gross neurological defect.
- (6) That the child should not be receiving remedial help from an outside source.

Selection Procedure

The parents of children thought to be suitable subjects were interviewed and a medical, developmental and family social history was taken.

The children were screened initially by means of the New South African Group Test (NSAGT), 2 children under the age of 8 were tested on the New South African Individual Scale (NSAIS). Those children with a full scale IQ of above 85 were then tested on the NEALE. A RAQ was computed and those children with a RAQ of 90 or below were then selected.

The parents of the children were seen again; those children who were to be in the Experimental groups, had the research orientation of the investigations explained to them. The parents of those children in the Control group were told that they would be contacted as soon as facilities were available for their children. When initial contact was made with these parents, it had been explained that this was simply a preliminary investigation.

Experimental and Control Groups - Assignment Procedure

The children were rank ordered according to RA and then randomly assigned to 3 groups, one to be assigned to the male therapist, one to the female therapist, the third being the Control group.

The children assigned to the two therapists were again rank ordered on the basis of RA. Those children with similar RA's were grouped into cells of 5. Thus the 5 children in either of the therapist's group with the lowest RA's formed a group, and then the next 5, and so on. In this way, each of the therapists was assigned 4 groups of 5 children. (One of the children in

the male therapist's groups withdrew during the experimental period, which accounts for the fact that at the end of this period, there was one group with 4 instead of 5 children).

The 4 groups of children assigned to each of the therapists were then rank ordered on the basis of RA. These groups were then alternately assigned to each of the Experimental groups (therapy or remedial reading). The first assignment was decided by the flip of a coin.

Composition of Experimental and Control Groups

The Experimental groups, a therapy group and a remedial reading group, consisted of 19 and 20 children respectively. The Control group consisted of 20 children. Table 1 indicates the characteristics of the respective groups.

Table 1

Experimental and Control Group Comparisons on Sex, Mean CA, IQ, RA, RAQ and Years Schooling

GROUP	V A R I A B L E S				
	CA	IQ	RA	RAQ	Years Schooling
<u>EXPERIMENTAL GROUPS</u>					
Therapy Group	9,9	102,68	8,2	79,68	3,6
N = 19 17 Males 2 Females					
Remedial Reading Group	9,72	104,6	8,02	78,7	3,1
N = 20 12 Males 8 Females					
<u>CONTROL GROUP</u>					
Control Group	9,63	99,8	7,85	80,9	3,1
N = 20 17 Males 3 Females					

As shown in Table 1, the Experimental and Control group subjects were matched on the variables of sex, CA, IQ, RA, RAQ and years of completed schooling.

Composition of the Male Therapist and Female Therapist Groups

Cutting across the therapy and remedial reading groups, the characteristics of the male and female therapist's groups are shown in Table 2.

Table 2

Comparison of the Sex, Mean CA, IQ, RA, RAQ and Years of Schooling of the Male Therapist's Group (Combining Therapy and Remedial Reading Groups) and Female Therapist's Group (Combining Therapy and Remedial Reading Groups)

GROUP	CA	IQ	RA	RAQ	Years Schooling
<u>Male Therapist's Groups</u> (Combining therapy and remedial reading groups) N = 19 14 Male 5 Female	10,0	103,9	8,08	77,73	3,4
<u>Female Therapist's Groups</u> (Combining therapy and remedial reading groups) N = 20 15 Male 5 Female	9,7	103,4	8,13	80,5	3,1

As Table 2 shows, the subjects of the male therapist (therapy and remedial reading groups), and the female therapist (therapy and remedial reading groups) were comparable on the variables of sex, CA, IQ, RA, RAQ and years of completed schooling.

APPARATUS

1. Reading Achievement Test

Neale Analysis of Reading Ability (NEALE)

This test, standardised on a British school population, was designed to test reasonably separate aspects of reading; word recognition, comprehension and rate. It provides three parallel forms. In this study, only the scores for accuracy and comprehension were used to compute RA. It was used as an initial measure of reading attainment and administered at the end of the experimental period to the subjects to measure any change which might have taken place. Different forms were used for the pre and post test measures.

2. Intelligence Tests

New South African Group Test (NSAGT)

A group administered test standardized on a population of South African children. This test was used as an initial screening device for the children of ages 8 - 12 years.

New South African Individual Scale (NSAIS)

An individually administered test standardized on a population of South African children. It was used as a screening device on 2 children who were under the age of 8 years.

3. Personality and Adjustment Tests

Junior Eysenck Personality Inventory (JEPI)

A self report which is designed to measure the two major personality variables of neuroticism/stability and extraversion/introversion.

Children's Personality Questionnaire (CPQ)

This questionnaire gives a picture of personality development

in terms of a number of distinct dimensions or traits. It is possible to obtain scores on broad, second-stratum traits, notably anxiety and extraversion. These second-stratum scores were used in this study. Savage (1966) considers this test to be the best personality questionnaire available for children in this age group.

Personal Adjustment Inventory by Carl R. Rogers (ROGERS)

An inventory which is a series of character and personality tests and which aims to assess the extent to which a child is satisfactorily adjusted to his fellows, his family and to himself. It provides 4 diagnostic scores: personal inferiority, social maladjustment, family adjustment, daydreaming, and a total score.

These personality and adjustment tests were used as an initial measure and administered at the end of the experimental period to the subjects to measure any change which might have taken place.

EQUIPMENT

The equipment consisted of a number of books which were thought to be suitable for these children. They were displayed in a library corner.

Various aides were used with the remedial reading groups.

A series of readers 'Sounds travel too' (Machanick, 1969) were used with the younger group of remedial reading subjects. This series is specifically planned for use with the remedial teaching

The Science Research Associates (SRA) Reading Laboratory (Parker, 1957) was used with the older group of remedial reading children.

GENERAL PROCEDURE

The Experimental groups - therapy and remedial reading - took part in testing sessions over successive days in which the CPQ, JEPI and ROGERS were administered.

The personality assessments, the family-social history taken from the parents, and reports obtained from teachers, were used as a basis for the planning of group therapy goals and procedures to which the therapy group was exposed over the following four months. During this period, the parents and teachers of this group were also seen.

The NEALE was used as a basis for the planning of remedial procedures to which the remedial reading group was exposed over the following four months.

At the end of four months, all the subjects in both the therapy and remedial reading groups were retested on the NEALE, CPQ, JEPI and the ROGERS.

The Control group, which had been tested on the NEALE, took part in testing sessions in which the CPQ, JEPI and the ROGERS were administered. They did not take part in any treatment procedures and simply remained on the waiting list for four months. They were then retested on the NEALE, CPQ, JEPI and the ROGERS.

The psychological tests were administered by clinical psychology graduate interns at the Clinic who were experienced in test administration.

Treatment procedures were undertaken by two clinical psychology graduate students with comparable experience and training in child psychology.

Both therapists saw their particular groups of children at the Cape Town Child Guidance Clinic for one hour twice a week.

The therapists also saw the parents and class teachers of those children who were in the therapy groups. The parents and teachers were seen separately as groups at more or less monthly intervals. These meetings were arranged in the evenings and held at the Clinic.

Therapy Procedure

The child's problem was looked at from a broad frame of reference and a wide range of measures was considered in helping the child.

Therapy procedures were directed towards a number of areas in the child's life. These included: social relationships, attitudes towards self, reading and school, worries and anxieties.

The parents and teachers of this group were involved in an attempt to give them a sympathetic understanding of the children and modify their attitudes towards them.

A broad approach to therapeutic procedures was adopted, in line with Graham's (1974) view that the more positive aspects of traditional methods should be combined with the more recent contributions to therapy. Non-directive play therapy, the release of emotions, the understanding of behaviour, were combined with social learning experiences and behaviour modification techniques.

It was accepted that the peer group has considerable influence on the behaviour and thinking of the child within the group, and therefore that group learning among peers is a valuable ally when attempting to modify personal characteristics. The sharing and recognition of the group in any progress, however small, is often

an effective reinforcer, and was therefore mobilised whenever possible. The exchanging of ideas and sharing of experiences among group members was actively encouraged. There was an emphasis on group problem solving with a focus on what they might do to solve a problem, putting forward various solutions, and then discussing these as a group.

The therapists were alert to engineering opportunities which would involve the children in activities where their chances for success and a feeling of accomplishment were high, so that whenever possible, realistic goals were set.

In short, the techniques used were reassurance, suggestion, persuasion, counselling, re-education and inspiration.

Group Goals

The broad aim set for this group was the improvement of the children's reading skills by means of the following more specific aims:

- (i) To improve the child's view of reading - getting him to view reading as a pleasurable pursuit and as a value.
- (ii) To get the children to commit themselves to trying to improve these skills.
- (iii) To improve the self-esteem of the child - to make him feel that he is accepted in his own right as a person.
- (iv) To improve the child's interpersonal relationships - to help him to understand his own behaviour and the behaviour of others, and to help him to understand the effect that his behaviour has on others.
- (v) To improve the opinions and attitudes of the parents towards the child.

- (vi) To improve the opinions and attitudes of the teachers towards the child.

Remedial Reading Procedure

In selecting the remedial reading methods used in this study, an attempt was made to select methods which would be suitable for remedial work rather than developmental reading methods meant for use in the regular classroom. Methods had to be selected which would require no special training for the therapist, but be acceptable as remedial techniques.

It was necessary to structure the procedure to some extent, in order that the procedure carried out by the therapists would be similar. As the therapists were working with groups of children who had different RA's, and considering that a method which is appropriate for a child at one age becomes inappropriate for him at another age, it was decided to use 'Sounds travel too' (Machanick, 1969) for the younger remedial groups, and the SRA Reading Laboratory (Parker, 1957) for the older remedial groups.

Guiding the procedure in the initial stage was an evaluation of the child's reading performance based on the results of the NEALE and the supplementary diagnostic tests of the NEALE. These tests gave an indication of the specific skill deficiencies of the child and the possibilities of relating teaching to these difficulties. As treatment proceeded, the tasks and material that were presented were modified on the basis of the children's performance. This was done at both the group and individual level. One of the reasons for doing this was to try and implement learning experiences in which the child would have reasonable success in as many of his responses as possible, to prevent negative learning and confusion, as well as damage to confidence.

and motivation.

The emphasis with the younger children was on developing the skills necessary in the mechanics of reading, that is, on the strategies needed for deciphering words by phonic analysis and acquiring a sight vocabulary. With the older children, although the skills required in the mechanics of reading were developed, there was a greater emphasis given to the reading comprehension skills, the acquisition of vocabulary and the grasping of meaning of longer passages. The language-experience approach was used with both groups.

Interest, praise and encouragement were shown whenever possible, especially if a child appeared to show genuine effort. The children were given regular feedback on how they were progressing and reminded of the progress that they had made. Attempts were made to make the procedures as pleasant as possible.

The sessions which the children attended were divided into short learning periods so that, for example, readers would be alternated with story telling, skill building games and language-experience approach.

Aims

The general aim was to improve reading skills. This involved a number of more specific goals, viz:

- (i) To improve the mechanics of reading and extend the sight vocabulary. This was attempted by methods and techniques directed towards developing the deficient phonic-analysis skills of the child, for example, letter sounds, initial blends, regular single syllable phonic words, irregular forms such as long vowels, as well as a sight vocabulary.

- (ii) To provide success with meaningful, interesting material. Children were provided with material at their reading level and use was made of self-made, interest-based material (language-experience approach). They were prepared for the content of any story, the meanings of new words were given and stressed and with the younger children, careful attention was given to details within a word.
- (iii) To encourage children to read on their own. This was attempted by making the children aware of and interested in books and what they contain. Considering that the act of reading is reinforced by the child's success in reading, the children were encouraged to read books at or below their RA by using such devices as asking them to look up information for their story books (described later), or by starting to read a story and then not finishing it.
- (iv) To develop and improve listening skills. This was developed by techniques such as reading a story and then getting the children to discuss what had been read.
- (v) To improve oral and silent reading. Oral and silent reading materials at the children's RA level were therefore provided.
- (vi) To develop and improve comprehension skills. As comprehension depends not only on language, but also a degree of fluency in reading, the development of this aim is covered by the aims which precede it.

Statistical Analysis of Data

The data which was used was pre/post test difference scores, that is, the difference between the subjects' initial scores and their scores at the end of the experimental period.

For the statistical analysis of data concerned with the effects

of treatment on the Experimental groups and the Control group, use was made of one way analysis of variance and t tests.

Calculations were performed on a University computer - UNIVAC 1106 time sharing system - at the computer centre of the University of Cape Town. A bio-medical computer programme for analysis of variance for one way design was used.

For the statistical analysis of data concerned with the effects of treatment on the male and female therapist groups, use was made of t tests.

RESULTS

Experimental and Control Groups

To determine whether the Experimental and Control groups differed with regard to important variables, means and standard deviations were computed for the remedial reading, therapy and control groups on the variables of CA, IQ, RA, and RAQ. These were summarized in Table 1.

The groups were then compared for possible significant differences in CA, IQ, RA and RAQ between the groups. Analysis of variance were therefore computed. The results showed that there were no significant differences between the means of the respective groups, and they were therefore matched with respect to CA, IQ, RA and RAQ.

Experimental Groups: Male Therapist's Groups and Female Therapist's Groups

To determine whether the male therapist and female therapist groups differed with regard to important variables, means and standard deviations were computed for CA, IQ, RA and RAQ. Analyses of variance indicated that there was no significant difference

between the male and female therapist's groups. They were therefore matched for CA, IQ, RA and RAQ.

Results from the Analysis of Data from the Experimental and Control Groups

The differences between the subjects' initial scores and their scores at the end of the experimental period (pre/post test difference scores) were computed for the subjects in the remedial reading, therapy and control groups from the results of the NEALE, CPQ (Anxiety and Extraversion factors), JEPI (E, N and L Scales) and ROGERS (Daydreaming, Personal Inferiority, Family Relationship, Social Inferiority and total scores).

1. Reading Achievement

To determine whether the Experimental and Control groups differed with regard to gains in reading achievement measures, means and standard deviations were computed for the remedial reading, therapy and Control groups on the NEALE pre/post test difference scores. These are detailed in Table 3.

Table 3

NEALE Difference between Pre and Post Test Score,
Means and Standard Deviations of Remedial
Reading, Therapy and Control Groups for
Analysis of Variance

Remedial Reading Group		Therapy Group		Control Group	
Mean	S.D.	Mean	S.D.	Mean	S.D.
16,50	9,72	17,47	8,53	1,95	6,18

The groups were then compared for possible significant differences by means of one way analysis of variance. The result is summarized in Table 4.

Table 4Summary Scores on the NEALE

Source	SS	DF	MS	F
Between groups	2993,48	2	1496,74	21,89**
Within groups	3828,69	56	68,37	
Total	6822,17	58		
** $p < ,01$				

These results show that there was a significant difference between the groups at the $p < ,01$ level.

A t test indicated that there was no significant difference between the means of the pre/post test difference scores of the remedial reading and the therapy groups. Both, however, differed significantly from the Control group.

These results showed therefore, that the retarded readers in the therapy group and the remedial reading group showed greater gains in reading achievement on the criterion test than those retarded readers in the Control group. The means of the remedial reading and therapy groups differed significantly from the Control group mean at the $p < ,01$ level. There was however, no significant difference in gains in reading achievement between the remedial reading and therapy groups.

2. Personality and Adjustment

To determine whether the Experimental and Control groups differed with regard to gains in personality and adjustment measures, means and standard deviations were computed for the remedial reading, therapy and Control groups on pre/post test difference scores on the CPQ, JEPI and ROGERS. The groups were then compared for possible significant differences by means of a

series of one-way analyses of variance. The results of these analyses of variants indicated that there was no significant difference between the means of the groups on any of the measures used, and it therefore appeared that no significant change had taken place in personality and adjustment, as reflected on criterion measures, in the remedial reading, therapy or Control groups.

Results from the Analysis of the Data from the Male Therapist and Female Therapist Groups

The differences between the subjects' initial scores and their scores at the end of the experimental period (pre/post test difference scores) were computed for the subjects in the male therapist's and the female therapist's groups from the results of the NEALE, CPQ (Anxiety and Extraversion factors), JEPI (E, N and L Scales) and ROGERS (Total).

Reading Achievement

To determine whether the male therapist and female therapist groups differed with regard to gains in reading achievement measures, means and standard deviations were computed for the NEALE pre/post test difference scores. They are detailed in Table 5.

Table 5

Means and Standard Deviations of the Male and Female Therapists' Groups on NEALE Pre/post Test Difference Scores

Group	N	Means	Standard Deviation
Male therapist	19	13,21	7,18
Female therapist	20	20,55	9,35
t = 2,74		p .01	

This table shows that the t test indicated that there was significant difference between the means of the pre/post test difference scores of the male therapist and female therapist groups, a difference which is significant at the $p < .01$ level.

These results showed therefore, that the retarded readers in the female therapist's group showed significantly greater gains in reading achievement on the criterion test than those retarded readers in the male therapist's group.

Personality and Adjustment

To determine whether the male therapist and female therapist groups differed with regard to gains in personality and adjustment measures, t tests were performed on the pre/post test difference scores of the CPQ (Anxiety and Extraversion factors), JEPI (E, N and L Scales) and ROGERS (Total) scores.

t Tests indicated that there were no significant differences between the means of the pre/post test difference scores of the male therapist and the female therapist groups on personality and adjustment measures.

These results indicated that there was no significant difference between the means of the groups on any of the measures used and it appeared therefore, that no significant change had taken place in personality and adjustment, as reflected on criterion measures, in the male and female therapists' groups.

DISCUSSION

Efficacy of Group Therapy and Remedial Reading with Retarded Readers.

Reading Attainment

As has been demonstrated in Table 4, there was a significant

improvement in the reading attainment of those children in the remedial reading and therapy groups when compared to the Control group. There was however, no significant difference between the children in the remedial reading group and the therapy group with regard to improvement in reading attainment. This conflicts with the findings of Lawrence (1971), who found that counselling with or without remedial reading brought about significantly better reading improvement than remedial reading alone.

The finding that the group of children who were receiving the traditional remedial teaching of reading showed significantly greater gains in reading achievement when compared with the children in the Control group who were receiving 'no treatment', is in accordance with the findings of Collins (1961) and Lawrence (1971).

A further finding of this study, that is, that a therapy type approach to the treatment of retarded readers effected significantly greater improvement in reading attainment when compared with children in the Control group who were receiving 'no treatment', is similar to the findings of Bills (1950) and Lawrence (1971 and 1972), but conflicts with the findings of Elliott and Pumfrey (1972) and Lawrence and Blagg (1974).

The difference between the results of these studies and the present study may be explained in part, by the following.

The children who took part in this study came from a highly selected population with regard to the following factors:

- (i) They represented a White middle-class population and it can be assumed that the children from this population would not be deemed deprived in terms

of their nutritional and experiential environment.

- (ii) One of the primary selection criteria used in this study was that the children should have a full scale IQ of 85 or above. Selection of the children was therefore based on verbal as well as non-verbal abilities. The children were thus of at least above average intelligence. As a group they had a mean IQ which was roughly similar to the general population.
- (iii) Not only were these children selected on the basis of total IQ, but additionally they were selected on the basis of RAQ, which utilized the ratio between the child's mental age and his reading achievement age. Using a RAQ would have the effect of overestimating the number of 'under achievers' in children of high IQ, and underestimating the same in children of low IQ.

The mean IQ's of the groups of this study were therefore higher than the other studies cited, for example, Lawrence (1971 and 1972).

The above-mentioned factors must be taken into consideration when comparing the results of this study with other studies. Furthermore, the fact that this study attempted to overcome many of the inadequacies in experimental design of other studies, must also be taken into account.

It would appear therefore, that treatment, whether by group therapy or remedial reading as outlined in this study, is able to effect an improvement in reading attainment which is significantly greater than 'no treatment'.

This study offered no solution to the problem of why there was no significant difference in improvement in reading attainment between the retarded readers who were treated by a remedial reading

approach, as compared with those treated by a group therapy approach.

Placebo effects were controlled in that both the remedial reading and the therapy group children saw the therapists for the same amount of time and with the same frequency, although the methods of treatment were varied. Both groups of children improved and there was no significant difference in the degree of improvement. It may therefore be postulated that placebo-effect was an important factor in bringing about that change, especially when these Experimental groups are compared with the Control group, who were not exposed to this effect.

The fact that neither of the therapists was a trained remedial reading teacher, has also to be taken into account when trying to explain this finding. It is possible that had the therapists been specialists in this field, the results might have been different.

Personality and Adjustment

The results showed that the retarded readers in the remedial reading and therapy groups did not show a significant improvement in personality adjustment measures when compared to the Control group, nor was there any significant difference on these measures between the remedial reading and therapy groups. These findings would therefore appear to support null Hypotheses 3 and 4.

This finding is in accordance with the findings of Carroll (1972) and Collins (1961). It is in conflict with the findings of Lawrence (1971 and 1972), whose results appeared to produce some positive personality change.

The fact that it was not possible to detect change in person-

ality and adjustment measures may be explained by the following: that the instruments may not have been sensitive enough to detect these changes; that the changes which occurred were not in the areas measured by the tests; that the methods used to analyze the data precluded the possibility of individual variations in the responses of the children from being detected.

The Effects of the Therapists

Reading Attainment

As Table 5 has shown, there was a significant difference in the improvement of reading attainment of those children in the female therapist's group when compared with the male therapist's group. The female therapist's group showed significantly greater gains in reading achievement than the male therapist's group.

This finding is in line with many authors (e.g. Meltzoff and Kornreich, 1970; Pumfrey and Elliott, 1970; Truax and Carkhuff, 1967) who have stressed that the therapist variable should be controlled and investigated when attempting outcome studies of different methods of treatment. The studies of Aspy (1965) and Hadlock (1966), and Lawrence (1972) may be seen as indicating similar findings in that gains in children's reading achievement levels appeared to be related to teachers with particular personality characteristics.

This study offered no solution to the problem of why there was a significant difference in improvement in reading attainment between the therapists' groups, but suggestions are offered.

(i) The personality characteristics of the therapists were not investigated.

(ii) The fact that the therapists' treatment groups were not matched at the different age levels, may have been an important factor in trying to explain these results.

(iii) Another factor which must be considered when trying to explain the difference in improvement between the therapists' groups, is the difference in sex between the therapists. In both therapist groups, the majority of children were boys. Studies e.g. Hall (1966), have pointed towards a relationship between poor father-child relationship in the case of boys, and the effect that this has for scholastic achievement. Further investigation of the boys in these groups may have revealed poor father/child relationships, thereby giving some ground for suggesting that this factor might have affected these children's attitude towards a male therapist rather than a female therapist, with a resultant effect on treatment outcome.

None of the children in either of these groups showed what Bergin (1967) calls the 'deterioration effect'. All the children showed improvement in reading attainment, although there were two of the children who did not close their CA/RA gap. There was however, enormous variation of the individual responses to both the male and the female therapists. This once again points to the problem which is encountered when group mean differences on measures are used, for these may not reveal important changes which might have taken place.

Personality and Adjustment

As discussed in the results, there was no significant difference between the male therapist and female therapist groups with regard to change in personality and adjustment, as reflected on criterion measures.

CONCLUSION

In conclusion, it is suggested that this investigation has demonstrated that

(i) A remedial reading and a group therapy treatment programme, as outlined in this study and administered over four months, was able to effect significant gains in reading attainment with retarded readers, when compared with the results of a group of children who were 'not treated'.

(ii) There was no significant difference between the remedial reading and group therapy treatment programmes with regard to the effect that these programmes had on the gains in reading attainment with retarded readers.

(iii) There was a significant difference between the gains in reading attainment of the retarded readers treated (irrespective of the treatment programme used) by the female therapist, when compared with the gains in reading attainment of the retarded readers treated (irrespective of the treatment programme used) by the male therapist.

The present study shows therefore, that both the remedial reading and group therapy approaches were equally effective in improving the reading attainment of retarded readers over a short period of time. It was not able to offer a solution to the problem of how exactly this efficacy operates. The findings do show however, that the therapist plays an important role in the outcome of treatment.

The fact that this study was not able to demonstrate that personality and adjustment changes had taken place in these children, must be viewed with caution. The changes in these areas

may have taken place, but because of the inadequacies of the measures used and by the examination of group mean differences on the measures used, it might not have been possible to detect these changes.

FUTURE RESEARCH

This study has demonstrated the short-term effects of a remedial reading and a group therapy approach to the treatment of retarded readers. It is necessary to know what the long-term effects of the relative programmes will be. It is therefore intended to carry out a follow-up study of these children after five years to see if there is a difference in the long-term gains between the children in the remedial reading, therapy and control groups.

It is also proposed that further statistical analysis of the existing data might elucidate some of the findings a little further.

Further research is needed in trying to unravel the factors which are involved in the effect which the therapist/teacher has in the treatment of retarded readers.

Finally, the fact that this study was not able to demonstrate personality or adjustment changes in these children, points to the great need in this type of research for the development of measurements which will be more sensitive and more able to detect the subtle changes which may occur in the areas of the child's life towards which this investigation was aimed.

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I N T R O D U C T I O N

1. INTRODUCTION

There exists among the population of poor academic achievers a group of children of average intelligence or higher, who experience persistent difficulty in acquiring reading skills in spite of adequate exposure to educational methods which are successful in teaching the great majority of children.

The nature and remediation of reading difficulties has presented a challenge to many different disciplines and generated a great deal of research. Despite this, evidence is still limited when considering the most effective approach to remedial procedures aimed at improving reading skills. The need for further research in this field has been stressed (Rutter, Tizard and Whitmore, 1970; Yule, 1973).

This study was intended to evaluate the relative efficacy of two approaches aimed at the remediation of retarded readers.

Definitions of Reading Difficulties

A survey of the literature reveals a confusion of terminology used in referring to reading difficulties. Cruickshank (1968) identified 43 terms used in the current literature, all of which referred to practically the same group of children experiencing these difficulties. We thus have terms like educationally handicapped, learning disabilities, minimal brain dysfunction, problem readers, psychoneurological learning disability, perceptually handicapped, strephosymbolic, dyslexic, and so forth. The concept of learning disorder has recently evolved to designate this heterogeneous group of children who do not fit neatly into the traditional categories of handicapped children. Mittler (1970) sees this

wider category as having the advantage of stressing the educational and developmental aspects of the problem. McDonald (1968) in reviewing definitions of the term has found that there is no generally accepted definition. The semantic problem makes the accurate identification of these children difficult and from an epidemiological, aetiological, prognostic and therapeutic point of view, is far from satisfactory.

This confusion of terminology reflects to some extent, both the complexity of involvements contributing to this disorder, as well as the different disciplines which have contributed to the diagnosis and classification of these children. For as Ravenette (1970) has pointed out, problems may be defined in relation to dimensions relevant to a particular profession. Any problem may be approached from a number of different dimensions - psychological, physiological and social. Thus the series of definitions developed independently in the various disciplines which have been brought to bear on the problem, could be seen as evaluations of the problem according to different frames of reference. In general, there appear to be three major kinds of definitions (Applebee, 1971). One set comes from professional educators, another from psychologists, and the third from doctors in various fields of medicine.

The term learning disorder, is primarily an educational concept. In broad terms, it refers to a significant difference between a child's actual achievement level and his functioning capacity based on his mental abilities. Furthermore, it is a term which attempts to describe the disordered function at a behavioural level. It is generally used as a generic term to refer to children who have difficulty in acquiring the skills, concepts

and competencies appropriate to their age and potential, and is restricted to children of low average to superior ability. As reading is one of the skills which a child is expected to master, difficulties in learning to read will be subsumed under the definition of learning disorders. A definition given by Bateman (1965) is fairly typical of what is understood by learning disorder: "children who manifest an educationally significant discrepancy between their estimated intellectual potential and actual level of performance related to basic disorders in the learning process, which may or may not be accompanied by demonstrable central nervous system dysfunction, and which are not secondary to generalized mental retardation, educational or cultural deprivation, severe emotional disturbance, or sensory loss" (p.220).

Some writers (Bateman, 1965; Kirk, 1968) have noted that learning disorders appear to fit into one or more of three broad types:

- (1) Reading problems. Bateman (1965) and Kirk (1968) use a broader category to include reading, writing and arithmetic as some of the many forms of academic disabilities.
- (2) Visual-motor disturbance. Bateman's (1965) and Kirk's (1968) equivalent category is referred to as nonsymbolic disabilities, and includes perceptual and expressive nonsymbolic disabilities.
- (3) Verbal communication disorders. Bateman (1965) and Kirk (1968) head this category 'Linguistic or symbolic disabilities'.

These groupings may be used for the sake of clarity, but nevertheless there is invariably an overlap or a compounding of

disorders under one classification and one disorder may be basic to another.

Having classified reading problems as a type of learning disorder, it is necessary to clarify what is meant by a reading problem. In the definition of learning disorder, one of the first criteria mentioned is that children manifest an educationally significant discrepancy between their estimated intellectual potential and actual level of performance. This means essentially, that the child is under-achieving. The controversy over a satisfactory way to define under-achievement will be discussed after considering definitions of reading problems.

Terms such as specific reading disability, reading retardation and impairment, and dyslexia, have all been used to describe children who fail to acquire reading skills in spite of normal intelligence, intact senses, 'proper' instruction and 'normal' motivation. Again, the confusing terminology reflects differences of opinion which exist about the nature of reading problems. This is well illustrated by the term dyslexia, which stems from the medical field and has been the subject of heated controversy (Reid, 1969; Rutter, 1969).

Money (1962) has defined dyslexia as defective reading and states that the reading defect may represent loss of competency following brain injury or degeneration; or it may represent a developmental failure to profit from reading instructions. It is this type of definition which cites brain damage as the cause of reading failure, which has been the subject of controversy. The controversy is not about such cases of identified gross brain damage, but the extension of this concept to a developmental one,

where a child has failed to acquire the ability to read in the absence of gross neurological impairment (Clark, 1971)

A review of the literature reveals that reading difficulties have been defined in a variety of ways:

(1) According to the assumed causative factor. Implicit in this type of definition is a view of reading disability as a syndrome in a medical sense. In this respect, Rabinovitch (1964) proposes three major groupings of reading difficulties which can be distinguished.

- (i) A 'primary reading retardation' in which the cause is endogenous - "a basic disturbed pattern of neurological organization" - resulting in an impaired capacity to learn in the absence of definite brain damage being suggested in the case history or upon neurological examination.
- (ii) A 'secondary reading retardation' in which the cause is exogenous, in that the child has a normal reading potential that has been impaired by negativism, anxiety, depression, emotional blocking, psychosis, limited schooling opportunity, or other external influence.
- (iii) 'Brain injury with reading retardation'. In this group the capacity to learn to read is impaired by frank brain damage manifested by clear-cut neurological deficits.

Dyslexia would include groups (i) and (iii) under the term.

Difficulties arise from the use of the concepts endogenous and exogenous. Much of the discussion of these terms has focussed on their use with depression. Nevertheless, the controversy which questions the validity of dichotomising the factors of aetiology and stressing either constitutional or environmental factors as being the predominant and determining influences in a

disorder, is relevant here. This controversy has been discussed by Lewis (1971) and Kendell (1968). One of the main objections to this distinction is the view that "Every illness is the product of two factors - of environment working on the organism; whether the constitutional factor is the predominant and determining influence, or the environmental one, is never a question of kind, never a question to be dealt with as an 'either/or' problem; there will be a great number of possible combinations according to the individual inherited endowment and training, and the particular constellation of environmental forces. To set up a sharp distinction 'in the interests of academic accuracy', when the distinction is not found in nature, is no help to thought or action" (p. 6).

(2) In trying to avoid the pitfalls of classifying according to assumed aetiology, reading difficulties have been defined according to the type of service which they require.

Three types of reading services are distinguished (Schiffman, 1964; Goldberg and Drash, 1968), and children grouped according to the type of service they require.

- (i) Developmental reader. This child develops reading skills commensurate with his intelligence and age. This type of service is provided in the regular curriculum.
- (ii) Corrective reader. This type of child is not working to his potential and labours to comprehend material which is set. In the proper corrective situation however, he can be restored to grade level in a relatively short time. This type of reader has been referred to by Fernald (1943) as having a partial disability. She feels that this type of reader will develop

normally after the faulty conditions (poor vision or hearing, illness, emotional instability or lack of adequate schooling) have been removed.

- (iii) Remedial reader. This is the group of readers who show 'severe symptoms of reading retardation' (Schiffman, 1964). They are characterized by slightly below average to superior intelligence and resistance to the conventional teaching methods, often having difficulty with the 'sight method'. They frequently show associated inadequacies in memory span, deficiencies in concept formation, and 'soft' neurological signs or emotional complications. This is the group which has been labelled 'dyslexic'. The type of service which this child requires is an individual and small-group instruction on a clinical basis by specially trained personnel.

This approach to the definition of reading difficulties focuses on the educational aspect. It may be seen as a further attempt at a meaningful differentiation within the broad group of children who are poor readers.

(3) A distinction between reading retardation and reading backwardness was used by Rutter, Tizard and Whitmore (1970) in the Isle of Wight Study - a distinction which has been shown to have validity (Rutter and Yule, 1975).

A retarded reader is the term used to describe a child whose reading is seriously retarded in relation to his general intellectual abilities. Reading backwardness is a term which describes reading which is backward in relation to the average attainment for that age, regardless of intelligence. This term would therefore include many retarded readers, but would also

include those children whose reading problems were associated with intellectual impairment. Retardation of reading is therefore descriptive of a specific disability in reading - specific in the sense that the reading difficulties are not explicable in terms of the child's general intelligence.

In terms of the definition of reading retardation, the child is 'under-achieving' in that his reading achievement is not up to the level which would be expected with regard to his age and intelligence. The term under-achievement has frequently been used to refer to retarded reading achievement, and a great deal of controversy has arisen about the measures used to assess this (e.g. Crane, 1959; Burt, 1959; Ravenette, 1961; Yule, Rutter, Berger and Thompson, 1974). The validity of much current practice in the detection of those who are retarded, has been called into question (Yule et al, 1974).

In assessing degree of reading retardation, it is not sufficient to consider merely the discrepancy between the child's chronological age and his reading age on some standard measure. It is necessary to consider also the child's intelligence. For "other things being equal, one generally expects a bright child to do better scholastically than a dull one" (Rutter, Tizard and Whitmore, 1970). The method Franzen (in Yule et al, 1974) devised to test whether a child's reading is lower than could be expected, was by means of an achievement ratio. The achievement ratio equals the reading age divided by the mental age multiplied by one hundred. This method is still used today in one form or another. There have, however, been statistical objections raised to this technique which stem from the 'regression effect'. Because reading attainment does not exactly parallel intelligence, the regression effect should be taken into account by means of

the regression equation. By this method, it is also possible to determine the statistical probability of any deviation from the expected value, which reduces the arbitrariness of the decision of where to place the cut-off point in deciding what level of retardation is necessary before considering a child as having a reading difficulty (Yule et al, 1974).

Discussion

In this study it was not possible to use a regression equation as a means of defining reading retardation. Rutter et al (1970) and Yule et al (1974) were able to use each of the populations that they derived the equations from as its own base, whereas in this study this type of data was not available.

Many of the objections raised against the use of an achievement quotient are directed towards its use as a method of detecting retarded readers. In this study however, the subjects had already been identified by their teachers as retarded readers, determined by the child's reading performance in the class situation relative to other individuals' performance within the same class. These children were therefore, with regard to reading performance, in the lowest 10% of the class.

The use of an achievement quotient should be seen more as a form of control. Although not the ideal, it does in some measure take into account the effects of intelligence, chronological age and achievement in reading.

Operational Definition of a Retarded Reader

For the purposes of this research, therefore, a retarded reader will be defined as a child having:

- (i) A reading achievement quotient of 90 or less.

The reading quotient was calculated by the following method:

The $\bar{X}$ of the accuracy and comprehension scores on the Neale analysis of reading ability test = Reading Age (RA).

MA is calculated from full scale IQ scores.

$$\text{Reading Achievement Quotient (RAQ)} = \frac{\text{RA}}{\text{MA}} \times \frac{100}{1}$$

The RAQ of 90 or less as a criterion was decided upon arbitrarily after taking into account the Standard Deviation of the group 7 - 11 years used for the standardization of the Neale Test of Reading Ability.

- (ii) A full scale IQ of 85 or more.
- (iii) Coming from a culturally adequate home - in this study a White middle class background. It was therefore assumed that they were not 'culturally deprived'.
- (iv) Intact senses in terms of adequate auditory and visual acuity.
- (v) Freedom from gross neurological defect.

Incidence

Much of the evidence on the incidence of reading difficulties is difficult to compare and evaluate. This is due to certain factors such as: the confusion of terminology used in referring to reading difficulties; the fact that many of the reports do not state the strategy employed in identifying the particular group for which incidence figures are given, and additionally, that most investigators have examined highly selected groups of children. Only an epidemiological study investigating a total child population, will give a reasonably reliable prevalence estimate.

Data is available from three epidemiological studies in which

total populations in various age groups were investigated.

Rutter, Tizard and Whitmore (1970), on the basis of their epidemiological study of Isle of Wight 10 and 14 year olds, found that the incidence of severe specific reading retardation (defined in terms of under-achievement, with Reading Age at least 2 standard errors below prediction) was 3,6% for 10 year olds, and 4,5% for 14 year olds. Yule (1975) states that these figures must be treated as minimal prevalence estimates because of the inevitable limitations of screening procedures.

Yule, Rutter, Berger and Thompson (1974), in their study of 1634 10 year old immigrant children in an inner London borough, found that over 6% of them showed severe specific reading retardation (defined in the same terms as the Isle of Wight Study). The incidence of specific reading retardation has therefore been found to vary markedly, so that the prevalence in the London study was twice as high as on the Isle of Wight.

Clark (1970) in her epidemiological study in Dumbartonshire, found 14,9% of 1544 children of 7 years of age to be without independent reading skills after about 2 years at school. That is to say, they had RAQ's ($\frac{RA}{MA} \times \frac{100}{1}$) of 85 or less. Further testing when the 'at risk' children were 9 years old, indicated that 1,2% were severely backward in reading (defined in terms of 2 years or more backward in reading), and 5,1% as moderately backward (between 1 and 2 years behind the level expected on the reading test for children of their age).

It is estimated in a Report of the Committee of Inquiry into the Education of Children with Minimal Brain Damage (1969), on the basis of available opinion, that 5% - 7% of the total White

South African school population have these difficulties.

These estimates give an indication of the magnitude of the problem of reading difficulties, and also explain in part why in recent years reading difficulties have come to be recognised as one of our most pressing problems.

Sex Ratio

All studies of the general population and of clinic samples, have found that educational difficulties occur more frequently in boys than in girls, this sex difference being more marked in the case of specific reading retardation (Malmquist, 1958; Money, 1962; Bentzen, 1963; Critchley, 1964; Eisenberg, 1966).

The epidemiological study of the Isle of Wight (Rutter et al, 1970) found that of 86 retarded readers (defined in terms of reading attainment being 2 years 4 months or more below the level predicted on the basis of a child's age and short WISC IQ), 66 were boys. This represents a male/female ratio of 3,3:1.

Heilman (Shiffman and Clemmens, 1966) has presented data giving the number and percentage of boys and girls reported as remedial reading cases, from ten different authors. The ratios in favour of boys range from 2:1 to 9:1, with most of them hovering around the 4,5:1 mark.

The explanations given for this sex distribution difference have suggested psychological and social factors. For example, that child-rearing practices and other social pressures centre largely around the role of the male child as the potential primary source of economic support for the family, and cause emotional problems which lead to his learning problems. These factors may well play some part, but the fact that other disorders show a

similar sex distribution, suggests a biological mechanism. Bentzen (1963) therefore regards physiological and maturational factors as being equally important, since the human male organism matures at a slower rate than the female. Thus she advances the hypothesis that some of the behavioural disorders and learning problems among boys, may be the result of a stress response of an immature organism to the demands of a society which fails to make appropriate provision for this biological age differential.

Different Approaches to Treatment

Given that there is a need for remedial help for children, the next point for consideration is the kinds of help that have been considered necessary.

There have been many approaches to the treatment of children with reading disabilities. The different approaches reflect to some extent, differences in views and initial assumptions that exist between those concerned with the education of these children.

Neat categorization of different points of view is seldom possible, and the following attempt is no exception. The approaches are neither mutually exclusive nor irreconcilable. In some cases, the headings are overly restrictive, since the work of individuals grouped under them is relevant to more than one approach.

Sensory-Neurological Approach

Reading has been considered to be dependent on more basic skills such as perceptual and perceptual-motor abilities, and therefore it is towards these underlying skills that many remedial programmes are now directed, "more in the U.S.A. than in the U.K. at present" (Tyson, 1970).

As the reading process has been looked at more closely in

recent years, so the underlying skills have attracted greater attention, which has led to the problem of the remediation of reading difficulties being intertwined with the remediation of the underlying skills. But interest in perceptual and perceptual-motor abilities has been increased also by the greater attention given to the learning problems of children who have been considered to be brain injured, and some account of this development is necessary to the understanding of the use of certain techniques.

In general, there appear to have been two main streams of interest.

One of the first recorded attempts to improve cognitive functioning by methods of sensory training, was that made by Itard (1962) in the 19th century with Victor, 'the wild boy of Aveyron'. Sequin continued exploration of sensory-motor training with handicapped children. His work strongly influenced Montessori (1912) whose 'scientific approach to pedagogy' included development of unique sensorial materials for visual, auditory, tactile and olfactory training. Although Itard, Sequin and Montessori worked with children who had physical and sensory impairments, as well as mental retardation, the sensory-motor training approach which they introduced has influenced remedial programmes today. In the 1930's and 1940's, however, there were few programmes designed to remedy those visual or auditory perceptual difficulties which had been stressed by those authorities on reading such as Gates, Monroe and Harrison, as being necessary both in reading 'readiness' and for progress in learning to read (Tyson, 1970). At this stage, the prevailing opinion was that adequate perceptual skills necessary for learning to read did not generally mature until the child was aged about 6 years, and this was possibly, in part, why

6 was considered the optimal age for the child to start learning to read. The stress was on the role of maturation in development.

By the 1960's, the educational climate began to change, particularly with reference to whether specific help should be given to children who showed developmental lags in the underlying perceptual skills. By 1964 (Frostig, Lefever and Whittlesey) . Marianne Frostig had constructed the Frostig Developmental Test of Visual Perception, and suggested that any children showing difficulties in any one of the five areas of visual-perceptual functioning evaluated by the test, should enter a training programme and devised the Frostig Developmental Program for Visual Perception (Frostig and Horne, 1964).

The other educational development in the United States of America which increased interest in perceptual difficulties and influenced remedial programmes, has stemmed from the work of Orton, Werner, Strauss and Lentinien (Hewett, 1969). In the 1930's, Orton had attempted to identify the syndrome of developmental reading disability as different from mental retardation or brain damage, and explain it in terms of faulty cerebral dominance (Tarnopol, 1969). He drew attention to two phenomena associated with reading difficulties: word reversals and atypical laterality. He interpreted word reversals as a directional confusion in the visual perception of symbols and considered them to be indications of mixed cerebral dominance, coining the word 'strephosymbolia' to describe the problem. Although the concept of cerebral dominance has aroused a great deal of controversy, with particular reference to laterality and directionality (Annett and Turner, 1974; Benton, 1962; Zangwill, 1962), and

research results have usually been equivocal (Ravenette, 1968), nevertheless the concepts of directionality and laterality have influenced methods of remediation, and are frequently detectable in the theoretical rationale of perceptual-motor training programmes (Barsch, 1965; Kephart, 1960; Knickerbocker, 1968).

In 1947 Strauss and Lehtinen published their book PSYCHO-PATHOLOGY AND EDUCATION OF THE BRAIN-INJURED CHILD, which had an impact on educationists and psychologists. They suggested that the chief behavioural characteristics which discriminated brain-injured children who presented as subnormal, from 'genuine' mentally subnormal children, was a difficulty in coping with figure-ground perception, whether in visual, auditory or tactile modalities. They also described specific techniques for teaching the child with difficulties in perception, as well as a possible combination of hyperactivity, perseveration, motor disinhibition, etc. While later research results by a variety of workers were equivocal in respect of the validity of the behavioural characteristics noted by Strauss et al as an aid in diagnosing brain injury, nevertheless the impact of their work has been far reaching, especially in the field of special and remedial education (Tyson, 1970). The dangers of diagnosing brain injury on the basis of behavioural characteristics only without supportive neurological evidence, have been recognised. A minimal brain dysfunction has therefore been postulated with supportive evidence from 'soft' signs, and has been widely discussed regarding its appropriateness for the group of children who show a severe learning disability in certain areas so that overall, they present as mentally subnormal and function as such in many learning situations (Clements, 1966; Masland, 1970). Gradually, however, the stress has moved

from the possibility of brain injury or dysfunction to the learning disability itself.

Since Frostig's remedial programme (Frostig and Horne, 1964), many others have been published in the United States of America, having in common with hers a stress on the developmental sequences of the basic aspects of behaviour, and focusing on lags in earlier developmental phases (sensory-motor, language and perceptual), thus helping the child to establish a firm foundation for cognitive and higher thought processes. Two main theoretical influences are evident in this approach: that of Piaget in relation to the stages of development and the interrelatedness of one stage with another, and that of Guilford in respect of the structure of intellect (Tyson, 1970). Some of the well-known programmes are those of Kephart (1960), Barsch (1967) and Delacato (1963).

This recent emphasis which has been placed on the 'neuro-physiological' factors which are said to be involved in the aetiology of this disorder, with treatment focusing on perceptual-motor training approaches, has led authors like Mann (1970) to state that "perceptual training is very much a part, if not the cornerstone, of today's modern orthopedagogy". However, having traced the movement in the United States towards the evolution of a category of handicapped child called the child with learning disorder, it is now increasingly recognised that perceptual handicaps are seen to be just one facet of a complex of disabilities.

Research findings show that the beginning aspects of reading appear to be closely related to perceptual abilities (de Hirsch, Jansky and Langford, 1966). However, when considering the question of the extent to which training in general perceptual skills will

lead to an enhancement of reading ability, the results are equivocal. Whilst it has been shown that improvements occur in perceptual functioning after training (Cratty and Martin, 1969; Wingert, 1969), there has been little evidence to show appreciable effects on Reading Age or other evidence of generalization (Cohn, 1966; Cratty and Martin, 1969; Rosen, 1966). In this regard, Hartman and Hartman (1973) have explored research literature and cite mounting research data which appear to show that perceptual training is relatively ineffective in improving reading skills. The change noted in some learning disability specialists, who had previously espoused perceptual training and are now returning to the more established techniques of remediation, is cited as added support for this finding. Furthermore, Money (A.C.L.D. Report, 1967, reported by Tyson, 1970) has observed that there are some children (girls with Turner's syndrome) who while being able to read up to or above their age-expectancy level, show quite severe problems in aspects of visual perception.

Mann (1970) dismisses perceptual training as "an educational fad, based upon unwarranted extrapolations from theory and a misreading of the perceptual-motor difficulties manifested by handicapped children. What is of value in it can be accomplished through traditional adapted educational and therapeutic approaches directed toward functional and relevant behavioural objectives, rather than toward isolated so-called perceptual improvements".

On the basis of available literature, it seems therefore, that although perceptual training may be useful at a preschool level, this approach to the treatment of school children who are experiencing reading difficulties, appears to be questionable. It

was therefore decided that in this study, in which the children were at the 8 - 12 year level, 'perceptual training' per se would not be a focus, although perceptual training was inevitably incorporated in the techniques used. For perception as defined by Goldberg (1968) as "the ability to recognize and use stimuli and interpret these stimuli by relating them to previous experience", is implied in almost any type of performance.

Psychogenic and Sociogenic Approach

This approach to the treatment of children with reading difficulties stresses the importance of emotional and personality factors; the child's interpersonal relationships with others within the family or school setting; the home circumstances and the effect that these have on the child's scholastic achievement, and more specifically, his progress in reading.

There has been growing interest in the investigation and treatment of emotional and behavioural difficulties in children, and in the investigation of temperamental variables in relation to scholastic achievement. Eysenck and Cookson (1969) consider that the lack of adequate measures in this field tended to channel most research efforts into the cognitive field. Realization that intellectual ability is only one of the determinants of achievement, as well as the development of better measures, has resulted in a resurgence of interest in this area.

The term 'maladjusted' has been used to describe those children who need some kind of help because of emotional or behavioural difficulties, or because of an unsatisfactory school or home situation. It is a term which has presented difficulties in that there has been a lack of agreement about the nature, classification

and aetiology of maladjustment.

The complex relationship between maladjustment and reading difficulties has been investigated and discussed by many writers (Sampson, 1966; Chazan, 1969; Azam, 1974).

Whilst most writers generally accept the existence of this relationship, they do not agree on whether the relationship is a cause effect or merely a concomitant of the reading difficulty. Nor do they agree on the specific forms of maladjustment associated with reading failure.

An even greater divergence of opinion exists on the effectiveness of an approach in the treatment of these children, which aims at improving adjustment and thereby improving reading skills.

These problems will be considered in some detail under separate headings.

Definition of Maladjustment

The term maladjustment is used in many varied senses in the literature. There would appear to be a lack of agreement on the use of the term by various investigators. Such terms as 'emotional instability', 'emotional disturbance', 'personality defect', 'insecurity' and 'immaturity' are all used and equated with maladjustment. However, if the very broad definition of maladjustment given by Chazan (1970) is accepted, many of the apparent discrepancies may be resolved.

Chazan has considered the difficulties in arriving at a satisfactory definition of maladjustment. According to him the term refers in very general terms to a child having difficulties, varying in degree, in emotional and social development, and indicates that he requires some sort of help. He stresses that in

view of the variable and changing behaviour of children, maladjustment will only refer to difficulties at a particular time and in a specific situation. Maladjustment is to be regarded as a handicap which may not be a permanent one.

It is apparent that maladjustment, as defined above, is a term which is able to embrace a number of widely differing symptoms and types. Various schemes for classifying the symptoms and types of maladjustment have been proposed. The complexity of factors involved, however, have led to numerous difficulties which are discussed by Chazan (1970, p.546). Agreement seems to be reached in recognizing a distinction between neurotic, or emotional disorders of an introverted type, characterized by inhibition and unhappiness, and conduct disorders, characterized by anti-social or aggressive behaviour.

A representative summary of the main symptoms which may be presented by the maladjusted child, is put forward by Leeson (1970).

The basic implication is that the child's emotional life becomes dominated by feelings of insecurity, frustration and unhappiness. The child may respond to these feelings by different patterns of behaviour, viz.

- (i) He may become over anxious to the extent of developing neurotic disorders.
- (ii) He may become over-inhibited and hyper-sensitive, possibly withdrawing from society, erecting at the same time, defences against human contact.
- (iii) He may become attention seeking and over-demanding of affection, or may resort to aggressive behaviour, or he may become a hostile child who rejects adults with anti-social behaviour.
- (iv) He may become generally apathetic with little

motivation, so that scholastic achievement is affected.

The main characteristics which develop from these patterns of behaviour are the child's difficulties in his personal relationships with parents, teachers and other children, and difficulties in responding to their overtures of love, guidance and friendship.

In view of the lack of agreement about the nature, classification and aetiology of maladjustment, it follows that investigators will use a variety of different measuring techniques to assess adjustment. The studies of Petrie (1962) and Tindall (1959) have indicated the low correlation found between various measures of maladjustment. They recommend that more than one method of assessment be used when attempting to draw any conclusions in regard to adjustment status.

Maladjustment and its Association with Reading Difficulties

Evidence for this association has come mainly from surveys. The main approach has been to determine the incidence of maladjustment in groups of retarded readers, and also the extent of reading difficulties existing in samples of maladjusted children. Comparisons of groups of 'poor' readers with 'good' readers have contrasted the difference in adjustment of these groups.

One of the earliest contributions in establishing the fact of a relationship was by Burt (1937) in exploring the causes of educational backwardness - including reading failure - as revealed in large-scale surveys in London and Birmingham. In 9% of all cases, Burt found that backwardness was explained on the basis of personality characteristics. In a further controlled study, he found some positive correlation between backwardness and certain

personality characteristics such as instability and lethargy.

Morris (1966) in her survey of Kent primary schools, compared the social adjustment of a group of 98 'good' readers with that of a group of 101 'poor' readers. The children were selected in their second year at primary school, and followed up in their third and fourth years. It was found, on the basis of the Bristol Social Adjustment Guide, that poor readers showed many more signs of maladjustment. She concluded that many poor readers are withdrawn, depressed, anxious for adult interest and affection, hostile, indifferent to adults, anxious to gain acceptance and prestige among other children, hostile to other children, and generally restless.

The findings of Morris are supported by the epidemiological study on the Isle of Wight (Rutter, Tizard and Whitmore, 1970). In all, 2200 children in the 9 - 11 year age range were examined. A group of 86 children, found to be severely retarded in reading (28 months behind the age expected for their IQ), were compared with a randomly selected control group of 147 children. It was found that significantly more of the retarded readers showed symptoms of maladjustment. When the reading results of the 118 children in the total sample found to be maladjusted were examined, it was found that the group was, on average, 19 months backward in accuracy of reading and 17 months backward in comprehension. When intelligence was partialled out, nearly a quarter of the maladjusted group were found to be at least 28 months retarded in their reading, compared with only 5% of the control group. Emotional and motivational influences were recognized as important factors in reading failure.

Further evidence for the high incidence of reading difficulties

among groups of maladjusted children is given by Roe (1965) in her report of a survey of 142 maladjusted pupils aged 5 - 15 years in I.L.E.A. boarding and day schools. She found that only 8 pupils could read at a level equal to or above their chronological ages. Twentyseven percent had reading quotients of less than 70. Over 50% had reading quotients below 80.

Douglas and Ross (1968) studied the school progress of approximately 4000 children classified into 6 groups, ranging from those children who were 'well adjusted' to a group of those who were 'least well adjusted'. They were classified on the basis of teachers' opinions, mothers' reports and a self-rating inventory. These groups were studied at the ages 8, 11 and 15. Their results showed scholastic progress (including progress in reading) to be adversely affected by maladjustment. The greater the evidence of maladjustment, the lower on the whole, was school performance. Similarly, Chazan (1962) found a positive correlation between adjustment and high attainment scores in the primary school population of South Wales. Whilst the investigators of the above surveys make no statement on the question of cause and effect, it is evident that maladjustment and reading failure are frequently associated and overlap.

Maladjustment as the Effect of Reading Failure

Reading is regarded as a skill which is vitally important in a society that is increasingly dependent upon literacy. It is often taken as self-evident that the child experiencing failure in reading will have feelings of personal inferiority, a lack of self-confidence, and an increased anxiety, which will contribute to his maladjustment. This view is indicated by many authors

(Begab, 1968; Goldberg and Drash, 1968; Michal-Smith and Morgenster, 1965 and Rabinovitch, 1964).

A number of studies distinctly state that reading failure may be the cause of maladjustment. An approach to the question of the nature of the association between reading difficulties and maladjustment, has been to consider which developed first, on the questionable assumption that the condition that was present earliest in the child's life is likely to be the primary condition in an aetiological sense. Thus, Fernald (1943) points to the evidence of 78 'poor readers' with problems of emotional adjustment. Only 4 of these children showed any evidence of personality difficulties when entering school. Fernald's findings appear to be confirmed by Malmquist (1958). In a detailed study of the reading performance of 400 first-grade Swedish children, she found evidence to indicate that reading backwardness produced a 'loss of stability'. 'Poor readers' had fewer nervous symptoms before coming to school (as reported by the parents), but were less stable in school (on the basis of teachers' ratings) once they had begun learning to read. If the evidence from parents' reports and teachers' ratings can be accepted, it would appear that reading failure had produced this loss of stability.

Although Monroe (1932) acknowledges that in some cases reading failure may be the result of unfavourable emotional attitudes, she states that 'more frequently' failure in reading is the cause of the development of emotional and personality problems. To support this assertion, she instances the tendency for remedial instruction in reading not only to improve reading attainment, but also to affect related personality problems.

Orton (1937), Preston (1940) and Mary Vera (1942) agree with

Monroe's observation that symptoms of maladjustment improve after effective remedial reading and therapeutic treatment have been applied for some time. This is taken as evidence to support their view that reading failure gives rise to personality difficulties and emotional maladjustment. According to Orton, children who when they started school, were normal as regards both their intellectual and emotional development, showed clear signs of emotional disorders and defective personality adjustment after they had experienced failure in the elementary stages of reading.

Preston (1940), in her comparative study of 100 poor readers and a control group of 67 adequate readers, drew the conclusion that the poor reader experiences strong feelings of insecurity within the school and home environment as a result of his reading failure. Insecurity is seen by her as an important factor in the development of maladjustment.

Mary Vera (1942) also made a comparative study of 264 poor readers and 264 good readers, and found the latter to be better adjusted (as assessed by the California Test of Personality). She failed to detect any significant differences between the very poorest readers and cases of slight retardation in the group of poor readers. This finding is in disagreement with Vernon's (1957) assertion that there will be a difference between these groups in that mild cases of reading difficulty often show little evidence of maladjustment.

Schonell (1948) and Mangus (1959) are of the same opinion as the above authors in maintaining that emotional problems may be the result of reading failure. They stress the ensuing sense of failure which undermines the child's self-confidence and self-esteem, making the child vulnerable to neurotic or delinquent

behaviour.

Maladjustment as the Cause of Reading Failure

There have been a number of investigators who consider that reading failure may be caused by maladjustment or other personality factors.

A survey in England undertaken by the Ministry of Education (1962) involved 220 retarded readers, aged 7 - 17 years, of average intelligence. It was reported that emotional factors were considered to be associated with reading disabilities in 116 of the children. In 92 of these 116 cases, the emotional disturbance was considered primary. Gates (1941) however, found that whereas emotional difficulties were present in 75% of the cases of reading disabilities he investigated, only in 19% could the emotional disturbance be considered primary.

Allport (1963) has defined personality as "the dynamic organisation within the individual of those psychophysical systems that determine his characteristic behaviour and thought" (p.28). Accepting this definition, it follows that personality factors will play a part in scholastic success in general, and reading failure in particular. Gann (1945) attempted to investigate personality organization and its relation to and influence on reading difficulties. She examined 3 matched groups of children who were retarded, average or advanced in reading. Personality traits were measured on a number of measures, including the Rorschach Test. The poor readers were found to have more negative personality traits and poorer emotional adjustment than the other groups. She considered that maladjustment caused reading failure and stressed that in treating the child who is failing in reading, it is necessary to take into account personality problems as well

as the learning problem. Similarly Ellis (1949), on the basis of his investigations of 100 children with reading disabilities, stressed the need to involve the total personality of the child for effective treatment.

Bennett (1938) found that in comparing good and poor readers, the latter showed an adverse adjustment to reading. Unlike Gann (1945), he was not able to detect a pattern of aetiological factors characteristic of poor readers as not present in good readers.

The difference in the results of the various studies may in part be explained by the use of different methods of assessment. This is illustrated by the study of Azam (1967), who compared the degree of adjustment and differences in personality between a matched group of 25 good readers and 25 poor readers. The measures used were the Bristol Guides, Cattell's CPQ and a sociometric test. There was little correlation between the 3 measures and the picture of personality adjustment varied with the method of assessment used.

Young (1938) has maintained that the emotional reactions of both parents and children are very significant in learning to read. The significant influence that the opinions and attitudes which not only the parents, but the teachers have regarding the children on their success in school, has been shown in studies such as those of Clarke (1960), Brookover, Patterson and Thomas (1965) and Brookover, Erickson and Joiner (1967).

Discussion

A determination of the nature of the association between maladjustment and reading difficulties, would have theoretical importance for the clarification of both the aetiology and the development of these disorders. Furthermore, the elucidation of which disorder

is primary and which secondary would have implications from a practical point of view. A review of the literature has shown the complexity of the problem and the lack of adequate and consistent answers. The methodological variations between the studies make it difficult to parallel the results.

Agreement appears to be reached between investigators, that a large number of retarded readers also evidence emotional and personality maladjustment. This has led to Vernon (1957) suggesting that in every case of severe reading disability, the possibility of temperamental and neurotic defects should be investigated. It also gives support for the studies (Lawrence, 1971, 1972; Shouksmith and Taylor, 1964) which are based on an assumption of maladjustment in reading failure.

It seems unlikely that the same mechanism will explain all cases, but rather than in certain instances, reading failure might be the effect of maladjustment, whilst in other cases it will be the cause of maladjustment, a view which does not rule out an interaction between the two. It has long been recognized however, that it is far more probable that in any case, there will be multifactorial determination.

Chazan (1959) has shown that a number of factors may combine to produce the symptoms of maladjustment. These include: the physical condition of the child; level of intelligence; personality disturbance; environmental factors, such as critical experiences in earlier childhood, parental and teacher attitudes, sibling rivalry, home conditions and family circumstances.

This stresses a view that in approaching a child who is failing in reading, "his difficulties need to be seen in the context of his whole life and this includes his environment, his family, his special abilities, his previous encounters with the reading task, and his view of himself" (Ravenette, 1968, p.91).

Further Considerations

A number of the abovementioned factors considered significant in the cause and effect of reading failure, have been investigated. Reading difficulties are often inextricably linked to low scholastic achievement. For a fuller understanding of the relationship between the various factors, it is necessary therefore, to examine studies which are concerned with overall scholastic achievement, as well as those primarily concerned with reading difficulties.

Purkey (1970) has dealt at length with the interplay of factors which contribute to the way in which a child views himself and his abilities. He considers that a child's 'self-concept' will be an important factor in both the cause and effects of scholastic failure. A considerable amount of evidence has accumulated confirming the importance of 'self concept' as a factor in learning difficulties, e.g. Andrews (1966), Lawrence and Winschel (1970), Quicke (1975) and Everett (1971).

The subjective and personal evaluation a child has of himself is influenced by parents and teachers in their role as the main validators of his learning activities. The work of Rosenthal and Jacobson (1968) illustrates, in part, the effect of the attitude of the teacher on the child's attainment. Their study suggests that among younger children, there is a tendency to perform at their school work according to their teachers' expectations.

Not only do the behaviour and attitudes of the teacher influence their pupils' attitudes, sense of security and self-esteem, but Barker-Lunn (1970) presents evidence to show that the way in which the teacher responds to an individual pupil influences his interpersonal relationships in the classroom. It was found that when the teacher tended to dislike the less able, the class tended to follow suit. Research in this field has clearly indicated that the more able children in any type of class tend to succeed in their social relationships with their peers (Heber, 1956), whereas many children with educational handicaps tend not to be liked and to be described as 'solitary' (Rutter, Tizard and Whitmore, 1970).

The importance of the quality of the teacher-child relationship and its implications for academic achievement, is emphasized in the study of Aspy (1965), who showed that gains in children's reading achievement levels were significantly related to teachers who were able to communicate warmth, genuineness and accurate empathy. A later study (Aspy and Hadlock, 1966) confirmed and extended the previous findings.

The emphasis on teacher-child relationships does not deny the close relationship between school progress and the emotional stability of the home. Fraser's (1959) comment, "A normal home background, emotional stability, freedom from tension and from economic insecurity, and consistent encouragement from parents, are necessary for a child if his school work is to reach the level allowed by his intelligence", which is a précis of her research findings, clearly states this.

The important influence of the family and home and its effect

on scholastic progress, have been noted by many authors. Ravenette (1968) points out that the child's initial approach to school will be in terms of the model provided by the family. If this model is different or opposed to what the school would like, the child may fail to learn or may not see the need to learn. A significant influence in this respect will be the factors which are related to social class, as the study of Morris (1966) has shown. Bernstein (1960) notes the language of the working class, which tends to be of a 'restricted' linguistic code, in contrast to the more 'elaborate' language used in books. Wiseman's study (Flowden Report, 1967) however, indicates that parental attitude, attitude to education and attitude to books and reading, will be more important than economic level and social class factors in determining educational attainment. Furthermore, specific factors of parental care which were found to be important were: that the problems associated with educational failure are likely to be eased with maternal support in a stable home, thereby permitting better school progress; the father's interest in school work is an important determinant of success.

The importance of the father-child relationship is being increasingly recognized and studies like Peterson, Becker, Hellmer, Shoemaker and Quay (1968) have indicated that emotional problems in boys may be related to the autocratic attitudes and lack of concern of the father. Hall (1966) has found that the failure to identify with an adequate male model adversely affected achievement motivation. Blanchard (1928) states that the negative attitude which a child may have towards the parents will influence the attitude of the child towards the teacher. Unrealistically ambitious parents, as well as competition with brighter siblings

and the changing of schools, are factors which Goldberg and Shiffman (1972) mention as being involved in scholastic failure.

These studies stress the need for educators to be more concerned with an understanding of the home, cultural and social environment of the child who is experiencing failure in reading.

Types of Maladjustment Associated with Reading Failure

Sampson's (1966) investigation found that there was little agreement between the investigators in this area. Results of their investigations tend to give very general descriptions of the personality types characteristic of poor readers. Vernon (1957) concluded after a review of the literature, that there was little evidence to show that backwardness in reading was associated with any particular type of personality defect or emotional disturbance. Recent studies indicate a need to examine this question more carefully.

Malmquist's (1958) study, which is one of the most detailed epidemiological studies of reading disability in the literature, showed that moderately backward reading (one standard deviation below the mean) was particularly associated with poor concentration, lack of persistence and lack of self-confidence and to a lesser extent, also correlated with nervousness. These findings are supported in part by Gregory (1965) in his study of 53 children aged from 6 - 10 years. He found a significant connection between reading failure and restlessness (defined as an inability to persevere and concentrate, and a liking for moment-to-moment satisfaction). These symptoms remained constant over the different age groups and did not appear to have been aggravated by reading failure. He suggests therefore, that restlessness had been at

least a contributory cause of reading failure. The relatively heavy incidence of 'anxiety for the approval of other children' exhibited by the older children, when compared to the somewhat lesser incidence among the younger poor readers, suggests that this form of anxiety is a product of reading failure. He suggests further investigation of the incidence of a restlessness: reading failure: anxiety sequence.

Morris (1966) found that boys appear to react to a reading disability with a different pattern of behaviour from girls. The boys showed more irritability, anxiety and restlessness. The Isle of Wight study (Rutter, Tizard and Whitmore, 1970), which was particularly concerned to determine to what extent retarded readers have an increased rate of emotional and behavioural disorders, revealed that severe reading retardation is very frequently associated with antisocial behaviour.

Researchers have long recognized that anxiety may impair effective intellectual performance in that it tends to overshadow other feelings when aroused, and the anxious individual has difficulty in attending to external stimuli or intellectual tasks at hand. These effects have been noted in a variety of intellectual tasks, such as memory, the learning of new material, problem solving and creative tasks (Sarnoff, 1959). Anxiety may also have a facilitating effect, as it may act as a motivating factor where sustained work is required. Whereas Lynn (1959) has shown that at the educational levels of the university and high schools, its disorganizing effects seem to be more than compensated for by its motivating powers, at the primary school level anxiety has been found to be negatively correlated with scholastic achievement in general (Eysenck and Cookson, 1969) and reading in particular

(Stott, 1966).

The development of the personality inventories of Eysenck and Cattell has stimulated interest in the problem of identifying and measuring personality factors which lead to scholastic success or failure. Certain trends have emerged from the studies investigating the relationship of personality and achievement. These trends have implications for reading failure.

Eysenck and Cookson (1969) have reviewed the literature. They conclude from an examination of the studies (Jones and Gwynne, 1960; Morrison, MacIntyre and Sutherland, 1965; Ridding, 1967; Rushton, 1966; Savage, 1966), that in junior school children extraversion may be a positive influence in scholastic success. The work of Butcher, Ainsworth and Nesbitt (1963), Callard and Goodfellow (1962), Hallworth (1961) and Lunzer (1960) is used to hypothesise a link between neuroticism and poor performance in junior school children. In their own study, Eysenck and Cookson (1969) confirmed that the stable extravert child is more likely to succeed at his schoolwork in the primary school. Entwistle (1972) points out that this simple pattern is complicated by indications that the relationship may differ with intellectual level, with type of institution and with the subject being studied. He also suggests a probable interaction between the teacher's personality and the performance of children of differing personality types. The practical implications of these research findings suggest the importance of variety in the presentation of material to be learned, and that no one teaching method will be ideal for all pupils.

Discussion

It has been shown that a large proportion of 'maladjusted' children are poor readers, and vice versa. Opinions differ markedly as to whether maladjustment is the cause, effect or concomitant of reading failure. Research has indicated the relevance of a variety of factors which contribute in producing the symptoms of maladjustment. Maladjustment, whether manifested primarily as an emotional disturbance or as a behavioural problem by the child, may therefore be seen as an important factor in reading difficulties. The child's initial or further adjustment to the school learning situation, is interfered with and the effective learning of school tasks is hindered.

For this reason, an approach to the treatment of reading difficulties would be by way of attempting to improve the child's behavioural and emotional difficulties, thereby effecting a change in the child's approach to learning situations at school in a way that will be more adequate and effective, with a resultant amelioration of reading skills. The method directed towards this type of constructive change is psychotherapy. Opinions have differed on the effectiveness of psychotherapy in improving adjustment and ameliorating reading failure (Bills, 1950; Lawrence, 1971, 1972; Pumfrey and Elliott, 1970). Before considering the latter problem, it is necessary to define psychotherapy and briefly mention various aspects of this method, many of which have been the subject of controversy.

PSYCHOTHERAPY

Definition

Meltzoff and Kornreich (1970) in Research in Psychotherapy, have

reviewed a large body of research on the effects of psychotherapy and the determinants and correlates of outcome. They discuss the various controversial aspects, not least of which is a suitable definition. Although psychotherapy has been defined as being synonymous with psychoanalytic therapy (Brammer and Shostrom, 1960), it may be used generically to include many specialized approaches besides psychoanalysis. It is used in this way by Meltzoff and Kornreich whose definition, which follows, will be used for the purposes of this research.

"The informed and planful application of techniques derived from established psychological principles, by persons qualified through training and experience to understand these principles and to apply these techniques with the intention of assisting individuals to modify such personal characteristics as feelings, values, attitudes, and behaviours which are judged by the therapist to be maladaptive or maladjustive" (p.4).

Immediately apparent in this definition is that remedial reading could well be subsumed as a form of psychotherapy, an analogy which is noted by Buss (1966). Meltzoff and Kornreich (1970) have attempted to overcome this difficulty by excluding from the realm of psychotherapy 'therapies without awareness', stating that, "A school teacher who succeeds in modifying the personality of a pupil incidentally to her primary teaching goal, would not be thought of as doing psychotherapy, even though some psychological principles were directly applied or formed the basis of her teaching procedures". And further that "the arrangement between teacher and pupil in their respective roles is not that of therapist and patient" (p.4). Although this exclusion is not entirely satisfactory in its attempts to delimit the subject matter under

review, it does however highlight the difficulties which ensue when attempting definitions of processes in which there is clearly much overlap.

Remedial reading which has as its primary goal the teaching of certain skills, will therefore be treated as a different but related process. The basic goal of psychotherapy is treatment of the subjective state of the patient as well as his more obvious overt characteristics (Winder, 1957).

Approaches to Psychotherapy

There are a wide variety of approaches to psychotherapy. These may be seen as falling into two general categories: those approaches that have in common the fact that basically they are varieties of some form of psychoanalysis, and behaviour therapies derived from principles of conditioning and theories of learning.

For many years the main therapeutic approach to treatment in child guidance clinics has been based on psychoanalytic theory. The main forces in this respect stem from the work and writings of Anna Freud, Melanie Klein and C.G. Jung. A historical development of child psychotherapy is well detailed by Kessler (1966).

Play therapy developed as a branch of psychotherapy in an attempt to adapt psychoanalytic therapy to children. When contrasting Anna Freud's views with those of Melanie Klein, the main points which arise are that Freud considers it more important to work with the family, and that the role of the analyst should include an educational aspect. Interpretation of play and unconscious conflicts is much more conservative; more attention is given to the ego defenses, and the child's participation is much greater (Kessler, 1966).

Rogers's client centred therapy evolved from the psychoanalytic philosophies of S. Freud and Rank. Rogers stresses the individual's capacity for growth and self-direction. Axline (1947) applied Rogerian client-centred philosophy to play therapy. The crux of non-directive play therapy lies in the complete acceptance of the child with little interpretation of play.

More recently other approaches are coming to the fore (Graham, 1974). Graham makes the point that psychotherapy based on a psychoanalytic theoretical framework, needs to be combined with other approaches so that the needs of individual children and their families can be met. Behaviour may often only be adequately explained by the use of a combination of models such as family relationships, behaviourist and psychoanalysis, used in a flexible way.

Marks and Gelder (1966) have written of the numerous theoretical meeting points between behaviour therapy and psychoanalysis. These two approaches, although frequently considered to be independent or mutually exclusive, are theoretically related, with each approach influencing the other. They conclude that certain disorders require behaviour therapy, others psychodynamic therapy and others a combined approach. Similarly Woody (1968) has pointed out that the components of behaviour therapy and psychoanalysis may be integrated for effective treatment. He suggests that three specific problem areas that are encountered in psychotherapy could feasibly benefit from behaviour therapy. These are the facilitation and acceleration of therapy, the elimination of uncomfortable symptoms either for the purpose of allowing the client to enter the therapeutic relationship free from the irritation and restrictions produced by the symptoms, or for those clients that could not

apparently benefit from regular verbal psychotherapy.

Within the educational field, Woody (1968) argues for the inclusion of a learning theory approach to counselling school children, but cautions that behavioural techniques should form only a part of a counsellor's repertoire and should be integrated with the more conventional forms of guidance techniques. He suggests techniques of positive reinforcement as a way in which classroom behaviour may be modified. Staats (1970) has successfully used this approach to motivate children to read highly structured phonic texts.

Mention should be made here of an approach which presents a way of thinking of the child, based on the comparatively new theoretical point of view of Kelly (1955). Kelly recognized the tendency for theories to depersonalize the individual and treat him merely as a subject. His theory of personal constructs puts forward the idea that no one knows better how the world is viewed by each person than that person himself. "Construct theory is an attempt to understand people in terms of the way each experiences the world and to understand their behaviour in terms of what it is designed to signify for the behaving person" (Bannister and Fransella, 1971). A recurrent theme in construct theory is the principle of self-characterization. The fundamental postulate, which emphasizes this self-characterization, is as follows: "A person's processes are psychologically channelized by the ways in which he anticipates events" (Kelly, 1955). Thus behaviour is seen as anticipatory rather than reactive. Man is seen as a thinking, inventing and behaving being.

Ravenette (1969) has illustrated how this approach may be

applied to child development in general and learning disorders in particular. The implications for the teacher are that to be able to help the child, it is essential to discover how he views the learning situation and what is expected of him. There needs to be a relationship in which the child likes the teacher and the teacher values the child. For, "Learning comes out of positive interactions, non-learning out of negative interactions. Whatever factors are associated with reading difficulties, reading difficulties themselves are also a reflection of the child's behavioural questions, his behavioural experiments and the interactions with life that each of these implies. Teachers are a part of a child's life" (Ravenette, 1969, p.11).

Despite the various theoretical approaches to psychotherapy, there are certain common factors which underlie almost every major theory. In one way or another they all emphasise the importance of the relationship between the therapist and the patient. Although Eysenck (1960) indicated that with regard to behaviour therapy, the therapeutic relationship may not be necessary, there seems to be evidence to show that the therapist's interest and approval may play an important, if not indispensable role in the treatment process (Sapolsky, 1960). Although research does not appear to have been able to effectively determine necessary therapist traits (Meltzoff and Kronreich, 1970), the therapist is nevertheless considered to play a key role in the therapeutic process. He therefore becomes an important variable in the assessment of the efficacy of different therapeutic procedures. Therapist variables such as length and type of experience and training, personality characteristics, interests, values and the social, ethnic and cultural background, need to be controlled.

A related issue when considering the therapist-patient relationship, is that of placebo effect. It has been clearly demonstrated that placebo effects in psychotherapy are real (Paul, 1967; Frank, 1968; Shapiro, 1971). Shapiro has discussed placebo effects as produced and influenced by patient and therapist and the treatment situation. He concludes by suggesting that therapy will be impaired unless placebo effects are recognized. For without this recognition, the efficacy of specific procedures will tend to be exaggerated and may encourage the use of one procedure and technique for all patients, rather than the developing of more flexible procedures which would make therapy more comprehensive, resourceful and effective (Shapiro, 1971). The mobilization of positive expectations in the patient has been described by Frank as the major factor in psychotherapy and placebo effects. These seem effective in relieving anxiety and depression. The patient's response seems to depend on the amount of attention he receives, the extent to which the therapy the patient gets coincides with his expectations, and the confidence-inspiring qualities of the therapist's behaviour (Frank, 1968). Bergin makes the point that if placebo processes produce change, these processes may be used deliberately as part of the therapeutic procedure.

The relationship between the therapist and patient is therefore an important element in the placebo effect and will in part determine its direction (positive, negative or absent). Previously it was assumed that a therapist, irrespective of interpersonal skills, could not be worse than no therapist at all. The concept of 'psychonoxious' therapist (Truax, 1963), or what Bergin (1967) calls 'the deterioration effect' is now accepted by most

psychotherapy researchers.

Mittler (1970) has remarked that the involvement of the parents in the treatment of the child is probably one of the most important developments of the future. With the available evidence on the importance of parental attitudes and home background in the development of the child's emotional and cognitive development, it seems that more than mere recognition of these factors is involved. This may be seen in terms of collaborating with the parents in planning activities in the home and attempting to modify parental attitudes.

Similar assertions may be made with regard to other significant adults in the child's life, viz. the teachers. When dealing with learning difficulties, assessment can only be a continuous dynamic process when there is continual feedback between the therapist and the teacher, so that further insight is gained into the educational and psychological needs of the child. From this insight, the needs for environmental change, as well as organismic change, may be effected. One not only modifies the child, but modifies the school and classroom.

Further Considerations

A further consideration when planning psychotherapy is the matter of individual versus group therapy. There are all types and levels of group psychotherapy which are discussed by Kessler (1966). Important points which arise from her discussions are that although group therapy started as an economic measure, this has not been the only motive underlying its continued use. The idea that each member of the group affects and is affected by every other member and that this interaction has therapeutic significance, has been

accepted. It is therefore more than a simple multiplication of individual therapy. It is felt that therapy in a group setting is more natural and closer to the reality of everyday life. Furthermore, a group setting has an important use diagnostically, especially if problems are related to interpersonal functioning. For a group setting increases the chances of uncovering the main problem more effectively. This is not to say that individual psychotherapy is superfluous, and efforts have been made to combine the two where possible. Meltzoff and Kornreich (1970), in reviewing studies comparing the outcomes obtained by group and individual methods of psychotherapy, conclude that there is little existing evidence of any systematic difference in efficacy between the two methods.

To summarize, there are a wide variety of approaches to psychotherapy and most child guidance clinics increasingly tend to use a broad frame of reference and to consider a wide range of measures which may help the child. These may include modifying the attitudes of parents or teachers to the child, direct psychotherapy in its various form and combinations, and attempting to bring about some change in the home and school.

Efficacy of Psychotherapy

The efficacy of psychotherapy has been a subject of much controversy since Eysenck's article in 1952. He argued forcefully that there was no evidence that psychotherapy with neurotics was any more effective than no treatment at all. The immediate impact of this paper was to generate refutations by writers such as Rosenzweig (1954), Luborsky (1954) and Strupp (1963), with replies being published by Eysenck (1961, 1965 and 1966). Bergin (1971) has suggested that a crucial factor contributing to the continuation of this controversy has been the ambiguity of the

data which has been used as evidence to support both the claims and counterclaims. Different percentages of improvement may be derived, depending on what criteria and what method of tabulating the reviewer uses. The effect of Eysenck's critique has been to facilitate the examination of the assumptions and procedures of psychotherapy. This has resulted in an improvement in the methodological sophistication and precision of more recent studies.

There have been several recent reviews of the outcome literature, many of which arrive at a more optimistic view than does Eysenck (Dittmann, 1966; Meltzoff and Kornreich, 1970). A more cautious conclusion is evident in the reviews of Kellner (1965 and 1967) and Strupp and Bergin (1969). They conclude that psychotherapy has been shown to be effective under restricted, specific circumstances, and that general tests of therapeutic effects yield the most ambiguity.

The effectiveness of child psychotherapy has been questioned by Levitt (1957, 1963 and 1971). In these reviews he reported similar percentages of improvement for treated and untreated groups. Child psychotherapy did not appear to facilitate recovery from neurotic disorder. Levitt's conclusions have been criticized by Kellner (1967) as being based on incomplete surveys. He points to the lack of sophisticated research design of the experiments conducted into the nature of the process and the short and long term effects of child psychotherapy, which make any valid appraisal difficult.

There have been many articles describing how ideal outcome research should be done (Eysenck, 1966; Meltzoff and Kornreich, 1970; Strupp and Bergin, 1969). The basic features of the classical experimental design include: an experimental or therapy

group, an equivalent control group not receiving treatment, and reliable procedures for measuring patient status before and after therapy. In addition, the effects of being tested, of waiting for therapy, are controlled for by either own control procedures or comparison with a separate control group. Also, factorial designs are proposed for additional control groups such as attention-placebo control subjects. In this type of design, the controls would see the 'therapist' and spend the same amount of time and with the same frequency as the therapy group subjects. The procedures introduced with this group are presumed to consist of 'non-therapeutic' conversation or activities. In this way, the effects of personal contact, belief, faith and suggestibility, which may stimulate behavioural change, are controlled. Although it is assumed that the one approach is involving a 'therapeutic' procedure and the other a 'non-therapeutic' procedure, Meltzoff and Kornreich (1970) point to the difficulty in accepting this, as these two approaches may still be sharing identical therapeutic aspects different from what are presumed to be therapeutic ingredients. Thus Rosenthal and Frank (1956) argue that the only adequate control when testing a particular type of therapy, is another form of therapy in which patients have equal faith. And further, that "if that which is therapeutic should turn out to be the placebo effect of faith rather than something specific to a given therapeutic method or technique, then the assessment of 'psychotherapy-placebo effect' would require comparison with a group that was not exposed to the process at all" (Rosenthal and Frank, 1956, p.23).

It follows, therefore, that if the experimental question is whether one type of therapeutic approach is comparable or superior

to an old one, the latter is the appropriate control. As both these groups will be exposed to personal contact, belief, faith or suggestibility, it is desirable to compare these groups with a group that was not exposed to the process at all. A methodological problem which presents here however, and which is apparently without solution, is the fact that a 'true' no-therapy control group is essentially impossible to set up and implement. For the control group will inevitably be involved in help-seeking behaviours that yield encounters with therapeutic agents in the environment (Strupp and Bergin, 1971). It seems therefore, that all patients receive some treatment, and the contrast is rather one of 'more of' against 'less of'.

In dealing with the special problems which arise in psychotherapy research with children, Levitt (1971) draws attention to the fact that as the child is a developing organism, it is difficult to determine whether the disappearance of original symptoms is due to developmental factors rather than intervention. Furthermore, a unique aspect of child psychotherapy is that it is common for persons other than the child to be a focus of treatment. Evidence (D'Angelo and Walsh, 1967; Gluck, Tanner, Sullivan and Erickson, 1964; Lessing and Schilling, 1966) appears to indicate that treatment is most effective if mother, father and the child are the focus of treatment. This stresses the need for a rigorously controlled experimental design in which, amongst others, there is an adequate sample size and control of such variables as patient variables, therapist variables, temporal variables and the control of bias.

Summary

In reviewing the literature on the therapeutic approaches which are adopted in the treatment of the child, it would appear that there is a re-appraisal of traditional methods. It is strongly suggested (Graham, 1974; Marks and Gelder, 1966; Woody, 1968) that to effectively meet the needs of children and their families, the components of the more traditional approaches to psychotherapy should be integrated with more recent approaches. There appears to be little evidence that any particular approach is dramatically helpful and it would therefore seem practical to use whatever measures will meet the needs of the individual.

The important role that the therapist plays in the therapeutic process is well recognized, as is the related issue of 'placebo effect'. Both are important variables which need to be controlled in the planning of studies designed to assess the efficacy of different procedures.

The need for rigorous experimental design is stressed for outcome research on therapy procedures. Such designs should include amongst others, at least experimental and control groups, adequate sample size and control of patient, therapist and 'placebo effect' variables.

REMEDIAL READING APPROACH

This approach to children with reading difficulties places emphasis on reading instruction, focusing on the nature of the skills to be taught and the designing of programmes which efficiently teach these skills to all children. The diagnosis and remediation of disabled readers from the educational point of view, would therefore be primarily concerned with the level of performance of the reader and the specific skill deficiencies of the reader functioning

below the range of acceptability, in other words, a process of finding out what to teach the child, which should also assist in deciding how to teach him. Although this approach places emphasis on specialised techniques to improve reading skills, consideration is nevertheless given to other important aspects of the child's personality.

There have been many authors who have concerned themselves with the controversial issue of how reading should initially be taught, the implicit assumption being "If a child fails to learn to read it is because ... he was inadequately taught ..." (Bateman, 1971, p.15).

A controversy that has been carried on over years has been over the relative merits of the phonic versus the whole word or look-say methods of teaching reading. These are the two major approaches, both of which have been criticised (Crosby, 1969; Ravenette, 1968) and recognition taken of their relative merits, so that today most methods of teaching reading tend to incorporate both. A search for improved ways to use phonics and look-say methods has also led to the development of the Initial Teaching Alphabet (ITA), which consists of 44 characters. The ITA has the advantage of eliminating confusing phonic irregularities by enabling the child to have a one-to-one correspondence between letter and sound. Although available evidence (Downing, 1966) suggests that a child's reading skills may be helped by using ITA when he first learns to read, it does not appear to be clearly shown which factors are responsible for any resultant improvement in reading skills (Ravenette, 1968).

The phonic and look-say methods are applied to the schoolroom situation in three principal ways, the first of which is the Basal

Reading Programme. The series of basal readers is supplemented by phonics which enable the child to attack words beyond the limitations of the reader. In general this scheme emphasises the principle of vocabulary control or the idea of few and frequent words, and stresses reading with meaning from the beginning, although this is incompatible with the principle of controlled vocabulary.

A second way of teaching is known as the Language Experience Approach. It involves the dictating of stories by the child to the teacher in such a way that each child builds up his own vocabulary. It is very personal to him as it is based on his own interests and experiences. It is felt that this approach enables a sequence to emerge which is as follows.

"What a child thinks about can be talked about; this can also be expressed in other forms (painting, writing, craft work, activities); anything he or she writes can be read as can that written by other adults or children; he uses the same symbols (letters) in writing over and over, and learns that each letter has one or more sounds (also that there are beginning sounds that can be written down, most words have ending sounds, and may have something in between); some words are used time and time again; what he writes and says is important to him and to others and that many of the words he uses are the same as those written for him to read by other people" (Lee and Allen, 1963, p.5). In discussing 'disadvantaged readers', Goodacre (1970) has recommended this approach, especially where it is given a form of structure.

A third method is the Individualized Approach, which endeavours to group together children with similar reading problems and teach

each group differently in accordance with its needs. Each group goes at its own pace and may receive more emphasis on phonics or less as the teacher judges its need.

Findings do not appear to support any single approach as the 'best' way to teach reading. In a study (Bond and Dykstra, 1967) comprising 27 separate projects, each attempted to compare 2 to 7 approaches to first grade reading instruction. In all, 78 approaches were studied using a total population of over 22 000 children. Thirteen of the 27 projects followed their original subjects through grade two, and 10 of these 13 were continued through grade three. Although the same pre-tests and post-tests were used in all studies to ensure comparability of data, these studies attempted to maintain little control over such factors as teacher behaviour and socioeconomic status of the children. No single approach emerged as the 'best' way to teach reading.

Numerous descriptions of the process of reading have been given in the literature. The accounts of Foss (1967), Ravenette (1968) and Vernon (1971) are but a few. Foss considers, on the basis of evidence from many sources,

"that the skill of reading is dependent on many lower-order habits, for instance: recognizing letters and sequences of letters, distinguishing them from their mirror images; progressing from left to right across the page, and passing from line to line downwards; coding; auditory discrimination; discrimination and remembering of sequence of sounds and of speaking movements; and discrimination of rhythm and pitch" (p.119)

In respect of backwardness in reading, Foss believes that it "may result from failure in any one of these lower-order habits and abilities, as well as from emotional blocks and inhibitions

which may not have any close relation with the skill itself" (p.120).

Analysing reading at a higher level, Harris (1961) divides developmental reading into two main areas of skills: skill in the mechanics of reading and skill in reading comprehension. The mechanics of reading include: certain skills of word recognition, among which are the acquisition of a large sight vocabulary; various strategies for deciphering unknown words by means of phonic analysis, structural analysis or contextual clues; and the development of different speeds of reading appropriate for different purposes. Closely related to the word recognition skills is a wide range of skills related to reading comprehension. It follows therefore, that a child who is having difficulties in reading may be experiencing failure in any one or more of these skills.

The planning of any programme for remediation of reading difficulties, must involve specific identification of such things as: the learning preference of the retarded reader; the level of performance of the reader and the range of acceptable performance around that level; the specific skill deficiencies of the reader functioning below the range of acceptability; the nature of the deficiencies as related to the reading act. In other words, relating remedial teaching of reading to diagnosis (Tyson, 1970), which is usually based on the use of a comprehensive reading test.

In order to meet the needs of a wide range of problems in the remediation of reading, a knowledge of a variety of techniques from which one or a combination of several can be chosen to suit a particular child's learning strategy, is necessary. Numerous descriptions are covered in the literature. Those of Lansdown (1974), Nicolson and Williams (1975) and Westwood (1975) are but a

few of the many to be found in the literature.

Having reviewed the methods and approaches which may be used in the remediation of the specific skill deficiencies of the disabled reader, the question of how effective these measures are is raised. A brief review of studies directed towards this issue will follow in the general discussion below, which briefly summarizes the broad issues which have been raised in the introduction up to this point.

General Discussion

The foregoing review of the literature serves to show the breadth of the problem with which one is confronted when attempting a study involving the treatment of children who have difficulty in acquiring reading skills: the problems of definition; the broadly different and yet to an extent, interrelated approaches to the problem of reading failure, which reflect the divergence of opinion which exists on the relative significance of the multiple factors leading to reading failure, and which will influence the method to be used in the treatment of the retarded reader. An important issue which arises from this is that of the relative effectiveness of the different approaches which may be used in trying to help the retarded reader.

What follows is a brief review of studies directed towards this issue.

Studies Evaluating the Effects of the Remedial Teaching of Reading

In attempting to provide remedial reading facilities, it is of practical and theoretical interest to have some evaluation of these procedures. A considerable amount of research has therefore been generated in this field, being mainly concerned with the short-term

and long-term effects of remedial teaching of reading. Chazan (1967) in a short but comprehensive article, has reviewed research in this area.

Difficulties arise when attempting to draw general conclusions from studies in this field. It has often been impossible to specify the methods used at all precisely because when considering remedial reading procedures, there are a great variety of teaching methods and different rationales. Many of the studies suffer from poor experimental design and inappropriate statistical techniques, the sample numbers are often inadequate and the selection procedures unsystematic and unanalyzed.

Listed below are some of the studies which have been concerned, amongst other things, with:

The short-term effects of such treatment - Birch (1948/9); Cashdan, Pumfrey and Lunzer (1971); Collins (1961); Curr and Gurlay (1953); Dunham (1960); Lytton (1961); and Shearer (1967).

The long-term effects of such treatment - Collins (1961); Lovell, Johnson and Platts (1962); Lovell, Byone and Richardson (1963); Lytton (1967); and Shearer (1967).

The influence of such treatment on one or more of the following, namely, attitude to school in general and reading in particular, and social and emotional adjustment - Collins (1961); Dunham (1960); and Valentine (1951).

The relationship between the frequency of treatment and improvement in the level of reading - Cashdan and Pumfrey (1969).

Results of these studies show that substantial short-term gains of 2 to 3 months of RA per month of remedial treatment are reported in, for example, Birch (1948/9); Collins (1961); Cashdan, Pumfrey and Lunzer (1971). A study not in accordance with these results is that of Cashdan and Pumfrey (1969). They found (a) that 12 boys receiving remedial reading teaching twice weekly over 7 months did not progress over a matched group of 12 boys receiving remedial reading teaching once a week over 7 months, and (b) that the groups receiving remedial reading did not differ significantly from the control group.

In assessing the long-term effects of treatment, results appear to be disappointing. Follow-up studies for varying periods of up to three years after treatment have indicated little or no difference between children who had received remedial education and those who had not, in terms of their attainment. Collins (1961) concluded from this research finding, that treatment only accelerated reading development and had negligible long-term effects. This finding was confirmed by Lovell et al (1962 and 1963). Lovell et al (1963) found in a two year follow-up study comparing the reading ability of children who had received remedial education with those who had been recommended for remedial education but had not received it, that there was no significant difference between the two groups.

Studies which are not quite in accordance with Collins (1961) are those of Lytton (1961) and Shearer (1971). Lytton found that in following up children one to two years after remedial treatment, some of the children had maintained their gains, particularly (a) those of higher intelligence and (b) those who remained in the primary school after treatment. Similarly, Shearer found that in

following up children $3\frac{1}{2}$ years after treatment, the RA of children who had received treatment was significantly higher than those who had not. Although he found enormous individual variations between the children, there was nevertheless a significant slowing down of progress after remedial treatment ceased. This was counteracted to some extent in those children who continued to receive remedial education in their Modern schools.

Findings

What follows is a setting down of what appear to be the most significant findings of these studies, and the explanations that have been put forward to explain the findings.

The general conclusion which could be drawn from the results of most of these studies would be that the remedial teaching was effective for most children insofar as it produced gains in reading ability which were significantly more than what would have been achieved had the children not been treated. The relatively rapid progress made during remedial teaching was not, however, continued when treatment ended.

Several explanations have been advanced in an attempt to account for the slowing down of progress after treatment, viz.

- (i) Curr and Gourlay (1953) showed that part of the gains reported in many studies were due not to remedial teaching, but to practice effects arising from using the same test at the beginning and end of treatment. Furthermore, that improvements in reading were also the result of familiarity gained during the period of remediation with the kind of materials found in the texts used to reveal the effectiveness of treatment. A study by Collins (1961) which was not subject to the objections

raised by Curr and Gourlay, has nevertheless confirmed previous findings.

- (ii) A view put forward by Shearer (1971) and supported by Carroll (1972), is that the factors which originally caused the reading difficulty, could be less important whilst the child is in the remedial situation but may become more potent when once treatment ceases. This view is supported by the studies of Lytton (1961) and Shearer (1971), which also give slight evidence that the longer remedial reading continues, the greater the child's gains. This emphasizes Morris's (1966) statement on the need for continuing compensatory education for children who fail to acquire reading at the junior level.
- (iii) Carroll (1972) suggests that it might be likely that the effect of treatment may have been to temporarily accelerate learning to read to a level reached earlier than would otherwise have been attained had treatment not been provided.

The studies gave no evidence to support to disprove that remedial reading had positive and beneficial effects on attitudes to reading and on social and emotional adjustment.

Carroll (1972) gives two reasons which might explain this finding: firstly, that the instruments which were used were not sensitive enough to detect changes, and secondly, failure in reading was only one of several factors leading to a negative attitude and/or social and emotional maladjustment. Treatment of the reading problem may have had little effect on the other difficulties, and therefore at the end of treatment little or no change in attitude or adjustment could be detected. It is therefore suggested that techniques directed towards an improvement in social and emotional adjustment, might also provide significant

gains in reading attainment.

The finding emerging from many of the studies is that there is a wide variation in individual response both to remedial teaching and in the progress made subsequently, and demonstrates the need for further research in this area. As reading failure appears to be related to a complex variety of interacting factors, individual and environmental, it is to be expected that there will be individual differences in response.

Studies Evaluating the Effects of a Therapeutic Type Approach to Retarded Readers

It has been shown to be generally accepted that a relationship exists between maladjustment and reading failure. It is therefore of practical and theoretical interest to have some evaluation of the effect of procedures directed towards improving adjustment and thereby improving reading skills. Few studies have been conducted however, to investigate the effects of therapy-type approaches on reading attainment. Pumfrey and Elliott (1970) have reviewed research in this area. Most of the studies which have been reported have used a non-directive play therapy approach, with the children receiving remedial teaching at the same time.

Below are some of the studies which have been concerned, amongst other things, with:

The short-term effects of play therapy on the reading attainment of retarded readers - Axline (1947b);
Bills (1950a, 1950b); Elliott and Pumfrey (1972);
and Fisher (1953).

The short-term effects of counselling by professions and non-professionals, as well as self-initiated learning on the reading attainment of retarded readers - Lawrence (1971 and 1972); and Lawrence

and Blagg (1974).

Results of the studies investigating the effects of play therapy, are difficult to evaluate. Although the studies of Axline (1947b), Bills (1950a) and Fisher (1953) showed an improvement in reading attainment in those retarded readers attending play therapy sessions, the studies of Bills (1950b) and Elliott and Pumfrey (1972) showed no improvement in reading attainment. Assessment is made difficult by the fact that these studies were of inadequate experimental design. Amongst others, there was no control group (Axline, 1947b); the sample numbers were small; the experimental period was very short (Bills, 1950a and 1950b); and there was no control for therapist differences.

Lawrence (1971) investigated the effects on reading attainment of individual counselling and compared these with the results obtained by a traditional remedial reading programme. Four groups of 12 children from 4 village schools who were considered by their teachers to be retarded in reading, were given the Schonell Word Recognition Test, the Sleight Non-Verbal Intelligence Test and the Porter and Cattell Children's Personality Questionnaire. It was found possible to match 12 children in each school on chronological age, sex, mental age (on the basis of non-verbal abilities) and reading attainment. The experimental period was 6 months. Group 1 received remedial reading from a specialist teacher for 6 months. Group 2 received remedial reading plus counselling for 6 months. Group 3 received counselling only for 6 months. Group 4 was a control group and received no special treatment. At the end of 6 months, all the children were re-tested on the Schonell Word Recognition Test and the Children's Personality Questionnaire. A basically Rogerian non-directive

type counselling method was used with the counselling group. His results showed that counselling with or without remedial reading for 20 minutes per week, produced significantly better reading improvement in these 8 - 9 year old retarded readers than remedial reading alone. The mean reading gain for the counselling group was ,61 compared with ,49 remedial reading and counselling, ,33 remedial reading and ,2 for the control group. Furthermore, there were indications that counselling might produce positive personality changes.

This study has been extended by Lawrence (1972) to test the hypothesis that it would be possible for non-professionals to achieve the same results with the individual counselling of retarded readers as those obtained previously by educational psychologists. Four village schools were then selected and 2 matched groups of retarded readers obtained within each school. One group received counselling, while the other group served as the control. The experiment lasted for 2 terms, at the end of which all counselled groups showed a rise in reading attainment. A further study by Lawrence and Blagg (1974) in which 4 groups of 6 children in each were investigated over 4 months, indicated that if the reading situation following counselling was controlled by using the Blagg Games Project, this was more effective than (a) individual counselling from a non-professional or (b) the Blagg Games Project only or (c) games without adult supervision.

Although Lawrence's (1971) study may be criticized on the basis that the sample numbers were rather small; that the groups were matched in terms of intelligence only on non-verbal ability (a poor criterion when investigating reading improvement); that no attempt was made to control for the important therapist

variable, and that only one measure was used when trying to assess personality change, it was nevertheless one of the first studies reported in the literature which has attempted to compare the effects of a therapeutic type approach with the results of a traditional remedial reading approach. Carroll (1972) makes the following comment:

"If the result of this study can be replicated using larger samples and better matched groups, it would seem that by using counselling techniques, it would be possible not only to improve social and emotional adjustment, but also to produce significant gains in reading ability. Whether or not such changes be long lasting, however, remains to be seen" (p14).

From the introduction to this study, it can be seen that the relationship between children's emotional difficulties, social and personal adjustment, their attitudes towards school and reading, and the effect that these have on reading attainment, have been investigated and discussed for many years (Chazan, 1967; Pumfrey and Elliott, 1970; Rutter, Tizard and Whitmore, 1970; Sampson, 1966). Whilst it is generally agreed that there is a significant relationship, writers have not agreed on whether maladjustment is a cause, an effect, or merely a concomitant of failure to acquire reading skills.

Traditional remedial reading teaching has been shown to have small and short-lived effect (Carroll, 1972). An alternative to this approach in the treatment of reading difficulties has therefore been by using procedures aimed at attempting to improve the child's behavioural and emotional difficulties, thereby effecting a change in the child's approach to learning situations at school

117

in a way that will be more adequate and effective, with a resultant amelioration of reading skills (Bills, 1950a; Lawrence, 1971 and 1972; Lawrence and Blagg, 1974).

Studies in this field are difficult to assess because they fail to meet many of the requirements of adequate experimental design. For example, inadequate sample size, properly matched control groups, inadequate controls for important variables such as the effect of the therapist. Nevertheless, there are indications that this 'therapy' type of approach may be more effective than the traditional remedial reading teaching approach in improving reading attainment (Lawrence, 1971).

Many authors (Pumfrey and Elliott, 1970; Sampson, 1966; Rutter, Tizard and Whitmore, 1971; Vernon, 1963; Yule, 1973) have stressed the need for further research in evaluating different approaches that attempt to help the retarded reader.

It seemed therefore, that a study evaluating the effects of a group therapy and a remedial reading approach with retarded readers would be valuable, a study which would attempt to meet the requirements of adequate experimental design. Therapy procedures were planned on the basis of Graham's (1974) view that to effectively meet the needs of children, the components of the more traditional approaches to psychotherapy should be integrated with more recent approaches. As the therapist variable may be one of the largest sources of variance in the results of a study of this nature, the effect of the therapist was specifically controlled and investigated.

AIM

The present study was designed to evaluate the relative efficacy on reading attainment, personality and adjustment of a group therapy approach compared with the results obtained by a traditional remedial reading approach with retarded readers. Additionally, to consider the effects on reading attainment, irrespective of treatment approach of two different therapists.

HYPOTHESES

For statistical reasons, these are stated in the null form.

- (1) Those retarded readers in the therapy group and the remedial reading group will not show greater gains in reading achievement on the criterion test than those retarded readers in the control group.
- (2) Those retarded readers in the therapy group will not show greater gains in reading achievement on the criterion test than those retarded readers in the remedial reading group.
- (3) Those retarded readers in the therapy group and the remedial reading group will not show greater gains in personality and adjustment as reflected on criterion measures than those retarded readers in the control group.
- (4) Those retarded readers in the therapy group will not show greater gains in personality and adjustment as reflected on criterion measures than those retarded readers in the remedial reading group.
- (5) Those retarded readers in the male therapist's groups will not show greater gains in reading achievement on the criterion measures than those retarded readers in the female therapist's groups.

- (6) Those retarded readers in the male therapist's groups will not show greater gains in personality and adjustment as reflected on criterion measures than those retarded readers in the female therapist's groups.

M E T H O D

2. METHOD

2.1 Experimental Design

A brief outline of the experimental design of this study will be presented here. All aspects will be fully discussed in the sections which follow.

To compare the relative efficacy of two different methods of treatment of retarded readers⁵⁹, selected subjects were randomly assigned to two experimental groups and a control group.

These groups were matched on sex, chronological age (CA), intelligence quotient (IQ), reading age (RA), reading achievement quotient ($RAQ = \frac{RA}{MA} \times \frac{100}{1}$), and years of completed schooling. The subjects in the experimental groups were exposed to two different types of approaches to the treatment of retarded reading. The one group was exposed to a therapy approach and the other to a remedial reading approach, and were therefore called Therapy and Remedial Reading groups. The control group received no treatment.

Initially, a battery of tests were administered to the three groups to establish a baseline measurement.

The Therapy group were seen twice a week over a period of four months in groups of five by a male and female therapist, whose approach was therapeutic in orientation. The parents and teachers of these children were also seen separately as a group.

The Remedial Reading group was seen twice a week over a period of four months in groups of five by the same male and female therapist, whose approach was focused on the remediation of the reading difficulty. The parents and the teachers of this group

were not seen as a group.

The control group subjects were left on the waiting list and received 'no treatment'.

At the end of four months the three groups were retested on the same battery of tests which had been used initially to establish a measurement of any change which might have taken place.

The study was therefore a completely randomized one-way design (Guenther, 1964).

Table 1

Experimental Design

EXPERIMENTAL GROUPS			
<u>Therapy Group</u>	Initial Assess-	Seen 2 x per	Reassessment
N = 19	ment. Adminis-	week over 4	after 4 months.
Male therapist	tration of Neale,	months for	Administration
group N = 9	CPQ, JEPI, Rogers.	therapy. Pa-	of Neale, CPQ,
Female thera-		rents and	JEPI, Rogers.
pist group		teachers seen	
N = 10		as a group.	
<u>Remedial Read-</u>	Initial Assess-	Seen 2 x per	Reassessment
<u>ing Group</u>	ment. Adminis-	week over 4	after 4 months.
N = 20	tration of Neale,	months for	Administration
Male therapist	CPQ, JEPI, Rogers.	remedial	of Neale, CPQ,
group N = 10		reading.	JEPI, Rogers.
Female thera-			
pist group			
N = 10			
CONTROL GROUP			
N = 20	Initial Assess-	'No treat-	Reassessment
	ment. Adminis-	ment'. Left	after 4 months.
	tration of Neale,	on waiting	Administration
	CPQ, JEPI, Rogers.	list for 4	of Neale, CPQ,
		month inter-	JEPI, Rogers.
		val.	

2.2 Subjects

The subjects were 59 White, English speaking children, who were selected from a waiting list of children referred to the Child Guidance Clinic, University of Cape Town. The children had been referred for scholastic failure associated with reading problems. The sources of referral were the headmasters or teachers of schools, general practitioners, or the parents of the child. When the child was referred by the parent, it was in response to a communication from the school that the child was not progressing satisfactorily.

The subjects represented 23 different schools, all situated locally (See Appendix B).

Thirteen of the children were girls. This sex differential in a ratio of 5:1 is very similar to other reported studies, in which reading retardation has been found to be far commoner in boys than in girls (Money, 1962; M. Critchley, 1964; Clark, 1970; Rutter, Tizard and Whitmore, 1970).

The subjects represented socioeconomic classes II, III and IV (U.C.T. Child Guidance Clinic Social Class Scale - See Appendix A) as indicated by their fathers' occupational achievements (Table 2). This appeared to be fairly representative of the particular population served by the Clinic, which is essentially White 'middle class'. It was therefore assumed that these children would not be considered culturally deprived.

Table 2

Summary of Social Class of
Fathers of Subjects

SOCIAL CLASS OF FATHER	SUBJECTS
Class II	11
Class III	36
Class IV	13
TOTAL	60

2.2.1 Criteria for Selection

These were:

- (1) That the full scale I.Q. score should be 85 or over so as to exclude mental subnormality.
- (2) The children were to be between the ages of 7 and 12. These age limits were decided on arbitrarily. The latter figure represents the upper limits of the age group accepted by the Clinic for remedial reading. The lower figure was selected because it would mean that the child had been attending school for at least one year.
- (3) The child's Reading Achievement Quotient ($RAQ = \frac{RA}{MA} \times \frac{100}{1}$) was to be 90 or below (Discussion on Pages
- (4) Intact senses in terms of adequate auditory and visual acuity.
- (5) Freedom from gross neurological defect.
- (6) That the child should not be receiving remedial help from an outside source.

2.2.2 Selection Procedure

A two-stage plan of investigation was followed. First, children who were felt to be possible subjects were taken from the waiting list of the Clinic for investigation. The numbers were insufficient to form Experimental and Control groups. Those children who fulfilled the selection criteria were therefore assigned to the Experimental groups only. A total of 68 children were screened at this stage, of which 40 were found to be suitable. The second stage took place eight months later when there were sufficient children on the waiting list to enable a Control group to be selected. At this stage 34 children were screened, of whom 20 fulfilled the selection criteria.

The procedure followed in the selection of all subjects was as follows.

The parents of children thought to be suitable subjects were interviewed, and a medical, developmental and family social history was taken. Special reference was made to the child having adequate vision and hearing, as well as being free from gross neurological defects. Information was elicited to ensure that the child was not receiving remedial help from an outside source. On this basis, children were selected for further study if the findings suggested that they might fulfil the selection criteria.

The children were screened initially by means of the New South African Group Test (NSAGT). Group tests are subject to the influence of reading skills, therefore the number of testees in the group never exceeded 8. Two children who were 7 years of age were tested on the New South African Individual Scale (the NSAGT has an age floor of 8 years). Only those children with an

I.Q. of 85 and above were then tested on the Neale Analysis of Reading Ability (Neale).

The testing of the children on the Neale was carried out on successive days. From the results of the intelligence tests and the Neale, a Reading Achievement Quotient (RAQ) was computed. Those children with a RAQ of 90 or below were then selected. The parents of these children were then interviewed for the second time.

The parents of the children selected for the Experimental groups were seen and the results of testing interpreted to them, as well as the research orientation of the investigation being explained to them. The importance of their co-operation in ensuring that the children attended groups regularly during the following four months, was stressed.

A different procedure was followed with the parents of those children being considered for selection into the Control group. When initial contact was made with the parents, it was explained to them that there was a waiting list at the Clinic. The parents were requested to bring their children to the Clinic so that preliminary investigations could be carried out. The examiner explained that the child would remain on the waiting list for a further three to four months before the parents would be contacted. The child would then be finally assessed before being treated by the Clinic.

2.2.3 Experimental and Control Groups - Assignment Procedure

There were two Experimental groups, with the children in these groups being treated by different methods. The groups were therefore called Therapy and Remedial Reading groups.

To control for the important variables of effect and sex of therapist, the Experimental groups were assigned to two therapists, one male and one female. Each therapist was assigned both a Therapy and Remedial Reading group.

The children were assigned to the Experimental groups in the following way.

The 40 children selected for the Experimental groups were rank ordered on the basis of RA and then alternately assigned to each of the therapists. The first assignment was decided by the flip of a coin. Table 3 contains a list of the subjects and their assignment to therapists.

Table 3
Subjects Rank Ordered on Basis of
RA and Randomly Assigned to
Male and Female Therapists.

No.	Subject	Sex	RA	Male Therapist	Female Therapist
1	A.McT.	M	6-5	x	
2	H.H.	F	7-0		x
3	K.B.	F	7-1	x	
4	M.N.	F	7-1		x
5	A.P.	F	7-2	x	
6	J.R.	M	7-2		x
7	D.S.	M	7-2	x	
8	J.C.	M	7-2		x
* 9	M.H.	M	7-3	x	
10	B.Q.	M	7-5		x
11	K.M.	F	7-5	x	
12	W.B.	M	7-5		x
13	C.B.	M	7-6	x	
14	N.M.	M	7-7		x
15	R.L.	M	7-8	x	

Table 3 (Cont.)

No.	Subject	Sex	RA	Male Therapist	Female Therapist
16	A.H.	M	7-9		x
17	J.B.	M	7-9	x	
18	D.H.	M	7-10		x
19	G.H.	F	7-10	x	
20	B.C.	M	7-10		x
21	M.S.	M	7-11	x	
22	S.T.	M	8-0		x
23	P.H.	M	8-0	x	
24	L.W.	F	8-1		x
25	J.G.	M	8-1	x	
26	W.H.	F	8-1		x
** 27	S.N.	M	8-4	x	
28	P.J.	F	8-4		x
*** 29	M.F.	M	8-6	x	
30	A.C.	M	8-6		x
31	A.L.	M	8-9	x	
32	M.S.	M	8-9		x
33	G.S.	M	8-9	x	
34	P.Q.	M	8-10		x
35	P.H.	M	8-11	x	
36	J.C.	M	8-11		x
37	J.S.	M	9-2	x	
*** { 38	J.L.	F	9-11	x	
*** { 39	P.L.	M	10-5		x
40	R.G.	M	10-6		x

* M.H. withdrew from the group within two weeks of starting and was replaced by G.B.

** S.N. (RA 7-10) withdrew from the group after three weeks of starting and was replaced by P.J. (RA 10-5).

*** M.F. dropped out of the group after 5 weeks and was therefore not replaced.

*** In order that the therapists' groups could be matched with regard to sex of subjects, P.L. and J.L. were interchanged at the outset.

It is seen from this table that a method of random assignment of subjects to therapists was followed with the following exceptions:

- (1) Subject No. 9 (M.H.) assigned to the male therapist, withdrew from treatment two weeks after the groups commenced. M.H. was therefore replaced by G.B. (on waiting list).
- (2) Subject No. 27 (S.N.) assigned to the male therapist, withdrew from treatment after $2\frac{1}{2}$ weeks and was replaced by P.J. (on waiting list).
- (3) Subject No. 29 assigned to the male therapist, withdrew from treatment five weeks after the groups commenced. He was not replaced and this accounts for the final numbers of the Therapy and Remedial Reading groups being 19 and 20 respectively instead of being equal.
- (4) Subject No. 38 (J.L.) and Subject No. 39 (P.L.) were interchanged at the outset so that the therapists' groups could be matched with regard to sex of subjects.

Having assigned the children to the therapists, the next step was to assign them to the Experimental groups, either Therapy or Remedial Reading. The following points had to be considered:

- (1) To handle the children satisfactorily, the number of children seen by an individual therapist during a session should be limited to a group of 5.
- (2) That it would be in the best interests of the child to include within the groups of 5, those children of similar reading ages (RA's).

The following method was followed.

The children assigned to each of the therapists were again rank ordered on the basis of RA. Those children with similar RA's were grouped into cells of 5, which constituted the various treatment groups (See Table 4).

Table 4

Subjects in Male and Female Therapist Groups
and Assignment to Therapy and Remedial
Reading Groups on Basis of RA

Male Therapist's Groups N = 19					Female Therapist's Groups N = 20				
No.	Subject	Sex	RA	Treatment	No.	Subject	Sex	RA	Treatment
1	A.McT.	M	6-5	Therapy (M1) N = 5	2	H.H.	F	7-0	Remedial Reading (F1) N = 5
3	K.B.	F	7-1		4	M.N.	F	7-1	
5	A.P.	F	7-2		6	J.R.	M	7-2	
7	D.S.	M	7-2		8	J.C.	M	7-2	
* 9	(M.H. G.B.)	(M M)	(7-3 7-10)		10	B.Q.	M	7-5	
11	K.M.	F	7-5	Remedial Reading (M2) N = 5	12	W.B.	M	7-5	Therapy (F2) N = 5
13	C.B.	M	7-6		14	N.M.	M	7-7	
15	R.L.	M	7-8		16	A.H.	M	7-9	
17	J.B.	M	7-9		18	D.H.	M	7-10	
19	G.H.	F	7-10		20	B.C.	M	7-10	
21	M.S.	M	7-11	Therapy (M3) N = 4	22	S.T.	M	8-0	Remedial Reading (F3) N = 5
23	P.H.	M	8-0		24	L.W.	F	8-1	
25	J.G.	M	8-1		26	W.H.	F	8-1	
**27	(S.N. P.J.)	(M M)	(8-4 10-5)		28	P.J.	F	8-4	
***29	M.F.	M	8-6		30	A.C.	M	8-6	
31	A.L.	M	8-9	Remedial Reading (M4) N = 5	32	M.S.	M	8-9	Therapy (F4) N = 5
33	G.S.	M	8-9		34	P.Q.	M	8-10	
35	P.H.	M	8-11		36	J.C.	M	8-11	
37	J.S.	M	9-2		38	P.L.	M	10-5	
39	J.L.	F	9-11		40	R.G.	M	10-6	

* M.H. withdrew and was replaced by G.B.

** S.N. withdrew and was replaced by P.J.

*** M.F. withdrew and was not replaced.

Thus the 5 children with the lowest RA's formed a group and then the next 5, and so on. It is seen in Table 4 that initially each therapist was assigned 4 groups of 5 children. As mentioned above, 3 subjects from the male therapist's groups withdrew shortly after commencement of treatment and only 2 were replaced. The male therapist, therefore, finally treated 4 groups of 5, 5, 4 and 5 children. Assignment of groups to treatment, and thus to the Experimental groups, was as follows.

The 4 groups of children assigned to each of the therapists were rank ordered on the basis of RA. These groups were then alternately assigned to each of the Experimental groups (Therapy or Remedial Reading). The first assignment was decided by the flip of a coin. The Therapy group thus comprised therapists' groups M1, F2, M3 and F4, and the Remedial Reading group comprised therapists' groups F1, M2, F3 and M4 (see Table 4).

2.2.4 Composition of Experimental and Control Groups

The Experimental groups, a Therapy group and a Remedial Reading group, consisted of 19 and 20 children respectively in each group with the following characteristics. (See Tables 5 and 6).

Table 5

Summary of Characteristics of Therapy Group Subjects
Showing Sex, CA, IQ, RA, RAQ, Years of Completed
Schooling and Therapist Group Membership

Subject	Therapist Group		Sex	CA	IQ	RA	RAQ	Years Schooling
A.McT.	M		M	8-2	95	6-5	81	2
K.B.	M		F	8-2	117	7-1	77	2
A.P.	M	M1	F	9-0	92	7-2	83	2
D.S.	M		M	9-11	94	7-2	76	3
G.B.	M		M	9-9	102	7-10	79	4
W.B.	F		M	10-3	85	7-5	85	4
N.M.	F		M	10-11	109	7-7	62	4
A.H.	F	F2	M	9-10	98	7-9	79	3
D.H.	F		M	10-0	107	7-10	72	3
B.C.	F		M	9-4	97	7-10	86	3
M.S.	M		M	9-4	103	7-11	82	3
P.H.	M	M3	M	10-8	96	8-0	85	4
J.G.	M		M	9-6	104	8-0	81	3
P.J.	M		M	11-2	104	10-5	89	4
M.s-L.	F		M	9-3	116	8-9	84	3
P.Q.	F		M	11-11	100	8-10	74	5
J.C.	F	F4	M	10-8	108	8-11	77	4
P.L.	F		M	10-5	125	10-5	72	4
R.G.	F		M	11-7	99	10-6	90	5
N = 19	17 Males		$\bar{X}$	102,68	9,99	8,2	79,68	3,6
	2 Females							

The Therapy group (Table 5) consisted of 17 males and 2 females.

The age range was from 8 years 2 months to 11 years 11 months (mean age 9,99 years).

The IQ range was from 85 to 125 (mean IQ 102,68).

The RA range was from 6 years 5 months to 10 years 6 months (mean 8,2 years).

The Remedial Reading group (See Table 6) consisted of 12 males and 8 females.

The age range was from 7 years 11 months to 12 years (mean age 9,72 years).

The IQ range was from 91 to 122 (mean IQ 104,6).

The RA range was from 7 years to 9 years 11 months (mean 8,02 years).

The RAQ range was from 60 to 89 (mean 78,7).

The number of school years which the children had completed ranged from 1 year to 5 years (mean 3,1 years).

Control Group

The Control group consisted of 20 children with the following characteristics.

Table 7

Summary of Characteristics of Control Group Subjects

Showing Sex, CA, IQ, RA, RAQ, Years of Completed

Schooling

Subject	Sex	CA	IQ	RA	RAQ	Years Schooling
C.S.	M	8-3	106	6-5	78	2
L.B.	M	10-7	86	6-10	76	4
A.G.	M	8-4	107	7-2	81	2
C.G.	M	9-9	91	7-3	80	3
M.G.	M	9-5	88	7-4	88	2
S.N.	M	8-3	104	7-5	86	2
P.I.	M	9-9	86	7-5	84	3
A.H.	M	10-11	87	7-7	71	4
G.E.	M	9-4	102	7-7	83	2
H.A.	F	8-4	116	7-7	81	2
A.F.	M	10-7	91	7-8	80	4
L.H.	F	9-5	103	7-8	78	2

Table 7 (Cont.)

Subject	Sex	CA	IQ	RA	RAQ	Years Schooling
C.R.	M	9-5	103	8-1	84	3
G.L.	M	9-0	108	8-1	84	3
S.R.	M	10-0	104	8-3	80	4
S.vdL.	M	9-7	100	8-3	86	3
K.B.	F	9-11	106	8-4	81	4
V.I.	M	10-9	85	8-5	82	5
M.vL.	M	10-5	111	8-7	68	5
P.K.	M	10-8	112	11-0	87	4
$\bar{X}$		9,63	99,8	7,85	80,9	3,1
N = 20 17 Male 3 Female						

As shown in Table 7, there were 17 males and 3 females.

The age range was from 8 years 3 months to 10 years 11 months (mean 9,63 years).

The IQ range was from 85 to 116 (mean IQ at 99,8).

The RA range was from 6 years 5 months to 11 years (mean at 7,85 years).

The RAQ range was from 68 to 88 (mean at 80,9).

The number of school years which the children had completed ranged from 2 years to 5 years (mean at 3,1 years).

The Experimental and Control group comparisons on sex and mean CA, IQ, RA, RAQ and years of completed schooling are shown in Table 8.

Table 8

Experimental and Control Group Comparisons on Sex,
Mean CA, IQ, RA, RAQ and Years Schooling

GROUP	V A R I A B L E S				
	$\frac{CA}{\bar{X}}$	$\frac{IQ}{\bar{X}}$	$\frac{RA}{\bar{X}}$	$\frac{RAQ}{\bar{X}}$	$\frac{YEARSSCHOOLING}{\bar{X}}$
<u>EXPERIMENTAL GROUPS</u>					
<u>Therapy Group</u>	9,99	102,68	8,2	79,68	3,6
N = 19 17 Males 2 Females					
<u>Remedial Reading Group</u>	9,72	104,6	8,02	78,7	3,1
N = 20 12 Males 8 Females					
<u>CONTROL GROUP</u>	9,63	99,8	7,85	80,9	3,1
N = 20 17 Males 3 Females					

As shown in Table 8, the Experimental and Control group subjects were matched on the variables of sex, CA, IQ, RA, RAQ and years of completed schooling.

Cutting across the Therapy and Remedial Reading groups, the characteristics of the male therapist's and the female therapist's group subjects were as follows. (See Table 9 overleaf).

Table 9

Summary of Characteristics of Male Therapist's Group
Subjects Showing Treatment Method, Sex, CA, IQ,
RA, RAQ and Years of Completed Schooling

Subject	Treatment	Sex	CA	IQ	RA	RAQ	Years Schooling
A.M.	Therapy N = 5	M	8-2	95	6-5	81	2
K.B.		F	8-2	117	7-1	77	2
A.P.		F	9-0	92	7-2	83	2
D.S.		M	9-11	94	7-2	76	3
G.B.		M	9-9	102	7-10	79	4
K.M.	Remedial Reading N = 5	F	10-4	102	7-4	69	4
C.B.		M	11-10	91	7-6	72	4
R.L.		M	10-2	93	7-8	82	4
J.B.		M	9-6	122	7-9	60	3
G.H.		F	8-7	100	7-10	88	2
M.S.	Therapy N = 4	M	9-4	103	7-11	82	3
P.H.		M	10-8	96	8-0	85	4
J.G.		M	9-6	104	8-0	81	3
P.J.		M	11-2	104	10-5	89	4
A.L.		M	10-5	99	8-9	82	4
G.S.	Remedial Reading N = 5	M	11-11	118	8-9	61	5
P.H.		M	9-5	117	8-11	82	3
J.S.		M	10-2	120	9-2	71	4
J.L.		F	12-0	105	9-11	77	5
$\bar{X}$			10,0	103,9	8,08	77,73	3,4
N = 19 14 Male 5 Female							

As shown in Table 9, there were 19 children, of whom 14 were male and 5 female.

The age range was from 8 years 2 months to 12 years (mean 10,0 years).

The IQ range was from 91 to 122 (mean IQ at 103,9).

The RA range was from 6 years 5 months to 10 years 5 months

(mean at 8,08 years).

The RAQ range was from 60 to 89 (mean at 77,73).

The number of school years which the children had completed ranged from 2 years to 5 years (mean at 3,4 years).

Female Therapist's Group (Combined Therapy and Remedial Reading Groups)

Table 10

Summary of Characteristics of Female Therapist's Group Subjects Showing Treatment Method, Sex, CA, IQ, RA, RAQ and Years of Completed Schooling

Subject	Treatment	Sex	CA	IQ	RA	RAQ	Years Schooling
H.H.		F	8-3	98	7-0	84	2
M.N.	Remedial	F	7-11	96	7-1	89	1
J.R.	Reading	M	8-6	96	7-2	86	2
J.C.	N = 5	M	7-5	115	7-2	80	1
B.Q.		M	9-4	107	7-5	77	3
W.B.		M	10-3	85	7-5	85	4
N.M.	Therapy	M	10-11	109	7-7	62	4
A.H.	N = 5	M	9-10	98	7-9	79	3
D.H.		M	10-0	107	7-10	72	3
B.C.		M	9-4	97	7-10	86	3
S.T.		M	8-5	119	8-0	81	2
L.W.	Remedial	F	10-3	100	8-1	80	4
W.H.	Reading	F	9-6	101	8-1	83	3
P.J.	N = 5	F	9-8	101	8-4	84	3
A.C.		M	10-11	92	8-6	86	4
M.S-L.		M	9-3	116	8-9	84	3
P.Q.	Therapy	M	11-11	100	8-10	74	5
J.C.	N = 5	M	10-8	108	8-11	77	4
P.L.		M	10-5	125	10-5	72	4
R.G.		M	11-7	99	10-6	90	5
		$\bar{X}$	9,7	103,4	8,13	80,55	3,1
N = 20		15 Male 5 Female					

As shown in Table 13, there were 10 children, of whom 7 were males and 3 females.

The age range was from 8 years 7 months to 12 years (mean at 10,43 years).

The IQ range was from 91 to 122 (mean at 106,7).

The RA range was from 7 years 4 months to 9 years 11 months (mean at 8,35).

The RAQ range was from 60 to 88 (mean at 74,4).

The number of school years which the children had completed ranged from 2 years to 5 years (mean at 3,8 years).

Female Therapist's Remedial Reading Group

Table 14

Summary of Characteristics of Female Therapist's Remedial Reading Group Subjects Showing Sex, CA, RA, RAQ and Years of Completed Schooling

Subject	Sex	CA	IQ	RA	RAQ	Years Schooling
H.H.	F	8-3	98	7-0	84	2
M.N.	F	7-11	96	7-1	89	1
J.R.	M	8-6	96	7-2	86	2
J.C.	M	7-5	115	7-2	80	1
B.Q.	M	9-4	107	7-5	77	3
S.T.	M	8-5	119	8-0	81	2
L.W.	F	10-3	100	8-1	80	4
W.H.	F	9-6	101	8-1	83	3
P.J.	F	9-8	101	8-4	84	3
A.C.	M	10-11	92	8-6	86	4
$\bar{X}$		9,01	102,5	7,69	83,0	2,5
N = 10		5 Male				
		5 Female				

As shown in Table 14, there were 10 children, of whom 5 were males and 5 females.

The age range was from 7 years 11 months to 10 years 11 months (mean age at 9,01 years).

The IQ range was from 92 to 119 (mean IQ at 102,5).

The RA range was from 7 years to 8 years 6 months (mean at 7,69 years).

The RAQ range was from 77 to 89 (mean at 83,0).

The number of school years which the children had completed ranged from 1 to 4 years (mean at 2,5 years).

Table 15

Comparison of the Sex, Mean CA, IQ, RA, RAQ and Years of Schooling of Therapy, Remedial Reading and Control Groups; Therapy Group Showing Male and Female Therapist Groups Separately); Remedial Reading Groups (Showing Male and Female Therapist Groups Separately); Male Therapist Group (Combining Therapy and Remedial Reading Groups) and Female Therapist Group (Combining Therapy and Remedial Reading Groups)

Group	CA $\bar{X}$	IQ $\bar{X}$	RA $\bar{X}$	RAQ $\bar{X}$	Years Schooling $\bar{X}$
<u>Therapy Group</u> N = 19 17 Males 2 Females	9,99	102,68	8,2	79,68	3,6
<u>Remedial Reading Group</u> N = 20 12 Males 8 Females	9,72	104,6	8,02	78,7	3,1
<u>Control Group</u> N = 20	9,63	99,8	7,85	80,9	3,1
<u>Therapy Group</u> (Showing male and female therapist groups separately)					
<u>Male Therapist</u> N = 9 Male Female	9,53	100,78	7,78	81,44	3,0

Table 15 (Cont.)

Group	CA $\bar{X}$	IQ $\bar{X}$	RA $\bar{X}$	RAQ $\bar{X}$	Years Schooling $\bar{X}$
<u>Female Therapist</u> N = 10 10 Male 0 Female	10,41	104,4	8,57	78,1	3,8
<u>Remedial Reading Group</u> (Showing male and female therapist groups separately)					
<u>Male Therapist</u> N = 10 7 Male 3 Female	10,43	106,7	8,35	74,4	3,8
<u>Female Therapist</u> N = 10 5 Male 5 Female	9,01	102,5	7,69	83,0	2,5
<u>Male Therapist's Groups</u> (Combining his therapy and remedial reading groups) N = 19 14 Male 5 Female	10,0	103,9	8,08	77,73	3,4
<u>Female Therapist's Groups</u> (Combining her therapy and remedial reading groups) N = 20 15 Male 5 Female	9,7	103,4	8,13	80,5	3,1

Table 15 indicates that the subjects in the male therapist's groups (combining Therapy and Remedial Reading) were similar to the subjects in the female therapist's groups (Therapy and Remedial Reading) on the important variables of CA, IQ, RA, RAQ and years of completed schooling.

The subjects in the Therapy group and the Remedial Reading group (irrespective of therapist) were also similar on the variables of sex and mean CA, IQ, RA, RAQ and years of completed schooling.

When comparing the male therapist's Therapy group with the female therapist's Therapy group and the male therapist's Remedial Reading group with the female therapist's Remedial Reading group, Table 15 indicates that it was not possible to match the subjects on the variables of sex and mean CA, IQ, RA, RAQ or years of schooling. The male therapist's Therapy group was a younger group (mean CA 9,53) than the female therapist's Therapy group (mean CA 10,41). The converse was apparent in comparing the male therapist's Remedial Reading group (mean CA 10,43) with the female therapist's Remedial Reading group (mean CA 9,01). Another observation is that the cells were numerically small, so that no distinction was made between these groups in the analysis of the figures.

In conclusion therefore, the subjects in the Experimental groups (Therapy and Remedial Reading) were comparable to the control group subjects on the variables of sex and mean CA, IQ, RA, RAQ and years of completed schooling. The subjects of the Therapy group were comparable to the subjects of the Remedial Reading group on the variables of sex and mean CA, IQ, RA, RAQ and years of completed schooling. The subjects of the male therapist (Therapy and Remedial Reading groups) and the female therapist (Therapy and Remedial Reading groups) were matched on the variables of sex and mean CA, IQ, RA, RAQ and years of completed schooling.

2.3 Apparatus

2.3.1 Psychological Tests

2.3.1.1 Neale Analysis of Reading Ability (Neale)

This test was devised to meet the practical need for a diagnostic measure which would not only provide a score of a traditional nature, but would also assess the child's difficulties, weaknesses, types of error, persistence and assets, all of which could be utilized in diagnosis. It has been described by both Vernon (1960) and Williams (1970) as much the best test of its type.

The test consists of six passages of prose forming a continuous reading scale for children aged from 6 to 13 years. The passages have been carefully graded with the help of word lists, and partly by the achievements of the children participating in the experimental work. The complexity of the sentence structure and the length of the passages have also been graded. There are eight comprehension questions to each of the passages, except in the case of the first passage, where there are only four. Three equivalent forms, A, B and C, make the test suitable for retesting after an interval. Norms are provided for accuracy, comprehension and rate of reading. The test therefore gives useful qualitative information at the same time as three separate quantitative measures of reading ability. As Netley, Rachman and Turner (1965) have demonstrated, the test does not suffer from repeated exposure and is, therefore, admirably suitable for retesting to assess progress. In this study the children were tested on Form A and retested on Form C.

The reliability of the scale is high. Neale (1969) quotes

the correlations for Word Accuracy between Forms A and B, and Forms A and C, as identical, being $.98 \pm .004$ in each case. Yule (1967) found the retest correlations on a sample of 140 children retested after an interval of one year as: Rate ,76, Accuracy ,95, and Comprehension ,93.

In this study only the Accuracy and Comprehension scores were used to calculate a Reading age (RA), which was the mean of the two scores. The Rate of Reading score was not included because of the relatively lower reliability correlation. The rate of reading is controlled to some extent in the Accuracy score because if the child pauses for longer than 4 seconds in attempting to read a word, it is scored as a refusal error.

In constructing the test, 12 passages were selected from an initial 50, and were tested on 192 children. The results were carefully analysed for the model type of passages appropriate to each age. The narratives matched to this model were then tested on 500 children randomly selected. A statistical analysis of the results indicated a satisfactory grading of the passages and established a method of scoring. Finally, the test was standardized on a well controlled sample. Over 2000 children were used to establish the norms.

This test also has good validity. The validity coefficients were ,95 based on the Ballard One-Minute Test, Vernon Word Reading Test, Holborn Scale and Peel English Test using a pooling square method.

Criticisms which have been made about the test are that it exposes a child to failure by requiring him to read a passage in which he makes 16 errors. It also has rather a high floor, making it inappropriate for children at the very early reading stages.

The use of this test for this study could be criticized on the grounds that it was standardized on a British population and the norms would not therefore be valid for a South African population. However, the primary use of this test was as a measure of improvement rather than as an instrument to detect reading difficulties. The children in this study had already been identified by their teachers as having reading problems. In the Report of the Committee of Inquiry into the Education of Children with Minimal Brain Dysfunction (1969), reference is made to the problem experienced in South Africa by those people working with children with learning disabilities. There is a serious shortage of tests which have been adapted for use with a South African population; consequently tests which have been constructed and tested overseas have to be relied upon.

On the other hand, it has particularly useful features. As stated above, it measures accuracy, comprehension and rate from a child's performance in reading one set of paragraphs. It also provides three parallel forms, which makes it most useful for re-testing after an interval. It is well standardized and provides a scheme of error analysis and diagnostic tests which are useful for the analysis of reading difficulties.

This test was therefore used to fulfil a number of purposes in this study. It was used as an initial screening device for the selection of subjects. It was one of the main instruments used for measuring any change which might take place as a result of intervention. The scheme of error analysis and diagnostic tests was one of the guides used in the planning of a programme for those children assigned to the Remedial Reading groups.

2.3.1.2 Intelligence Tests

2.3.1.2.1 New South African Group Test (NSAGT)

This group intelligence test has three levels: Junior (ages 8 - 11), Intermediate (ages 10 - 14) and Senior (ages 13 - 17). In this study, the Junior and Intermediate Series were used.

The test consists of 6 subtests, 3 containing non-verbal and 3 containing verbal items. Each subtest consists of 30 items, the first 5 being used as practice examples. All the items are of the multiple choice type, in which the testee has to indicate the correct answer from 5 possible answers. Three scores are computed; verbal, non-verbal and total.

The rationale of the test comes from Vernon's description of the structure of mental abilities, embodying two major divisions, verbal-educational and practical-mechanical, integrated into Spearman's *g*.

The standardization sample was chosen to represent the country's educational system for White pupils. Controls were applied for the ratio of English to Afrikaans speaking pupils (2:1), geographic location (all four provinces were represented), urban-rural distribution, types of schools (provincial, private, provincial-aided). At junior level, 2923 Afrikaans speaking and 1525 English speaking pupils were tested. At intermediate level, 3849 Afrikaans speaking and 1870 English speaking pupils of ages 10 to 14 years were tested. The preliminary manuals give an account of the norming operations and the results. Norms for the two population groups were calculated independently.

Scores on the NSAGT may be expressed as deviation IQ's, percentiles or as Mental Age. Although the calculation of mental

age violates the rationale of this test, it was included for those test users who require mental ages to determine rank orders. As mental age was required in this study to enable a reading achievement quotient to be computed, it is a necessary inclusion.

The standard errors of measurement, based on one form reliability estimates for the total score of the combined (Afrikaans and English) group, on the intermediate series are 5,7 for raw scores and 3,0 for IQ points, and on the junior series 5,5 for raw scores and 2,5 for IQ scores.

Reliability coefficients calculated for the non-verbal, verbal and total scores of the two groups combined on the junior series ranged from ,89 to ,96, and for the intermediate series from ,88 to ,96. As this test is still at the preliminary stage, neither the stability of the test nor the parallel-forms reliability coefficient has been determined.

Early information on the validity of this test for predicting school success indicates that the verbal subtests together yield a higher correlation with achievement in a Silent Reading Test than do non-verbal subtests ,86 verbal and ,81 (Junior series) and ,87 and ,88 verbal and ,72 and ,74 non-verbal (Intermediate series).

This test has a major weakness, which under certain experimental circumstances might preclude its reliable use. The child must be able to read to carry out the test, so that verbal intelligence and reading ability are confounded in the one test. In the administration of the test, special care was taken to overcome this limitation. The groups of children being tested never exceeded 8 in number, so that a careful watch could be kept over the children to make sure that they knew what they were

supposed to do, and to detect quick random responding. Answer sheets were scrutinized for peculiar response patterns. In general, however, it was felt that this limitation is only moderately relevant to the present study. This test was used as a screening device for the selection of children for the groups. The main concern was to exclude from the group those children whose reading retardation was explicable on the basis of intellectual retardation. Although this test penalizes the child with reading difficulties and will tend to misclassify children as intellectually subnormal who in fact may not be so, this may be seen as an advantage in this study. It can then be stated with confidence that those children whose reading failure is based on intellectual retardation, have been excluded.

The NSAGT was chosen because, with the necessity to screen a large number of children, a group test was needed for economy of time. Additionally, it is the only available group test which has been standardized on a White South African school going population.

2.3.1.2.2 New South African Individual Scale (NSAIS)

This intelligence test is intended for children between the ages of 6 to 17 years. In this study it was used for a small number of children whose ages fell slightly below 8 years, and were therefore not able to be tested on the NSAGT. The test is administered individually to the child and takes at least an hour to administer to the young child; it would therefore not have been feasible to use this test as a general screening device in this study.

The test consists of 9 subtests, 5 containing verbal and 4

containing non-verbal items. The verbal tests are: Vocabulary, Comprehension, Verbal Reasoning, Problems and Memory. The non-verbal tests are: Pattern Completion, Blocks, Absurdities and Form Board. The tests are named merely for the sake of convenience; the names do not necessarily indicate the abilities measured. The subtests consist of homogeneous items arranged in rank order of difficulty. Scores are computed for the 9 subtests, as well as verbal, non-verbal and total scores. On 4 of the subtests (Problems, Pattern Completion, Blocks, Absurdities), scoring is based on power (accuracy) scores and power scores plus a time bonus for each correct item (power plus time scores).

The rationale of the test comes from Vernon's description of the structure of mental abilities, embodying two major divisions, verbal-educational and practical-mechanical, integrated into Spearman's *g*.

The standardization sample was chosen to represent the country's educational system for White pupils. Controls were applied for the ratio of English to Afrikaans speaking pupils (2:1), geographic location (all four provinces were represented), urban-rural distribution, types of schools (provincial, private, provincial-aided). The final standardization sample comprised 1590 White Afrikaans speaking pupils and 812 White English speaking pupils who were tested on the full battery of tests. The Vocabulary subtest, in which the two language groups were required to answer two completely different tests, was standardized separately. The preliminary manual gives an account of the norming operations and the results.

Reliability coefficients computed by the split-half technique (odd-even splits), with appropriate correction for the full length

of the test, are presented in the manual for 5 age groups. The reliability coefficients calculated for the verbal, non-verbal and total scores (power) for the 5 age groups range from ,70 to ,98.

The standard errors of measurement, based on split-half reliability estimates, for 5 age groups on verbal, non-verbal and total scores (power), range from 2,2 to 8,3 (IQ units).

As this test is still at an early stage, very little data on validity is available. Although there is some indication of the predictive validity of the test in respect of school achievement, the data analysed is only applicable to a 13 and 16 year old group of children, an age group not covered in the present study.

The NSAIS was used in this study to test 2 children who were 7 years of age. Their ages therefore fell below the lower age limit of the NSAGT (8 years). This test was chosen because it is one of the most widely used intelligence tests in South Africa and is the only available individual scale standardized on a White South African school going population. Ideally, these children should possibly have been tested, using a similar form to the NSAGT at a lower level. Although a lower level of the NSAGT has been developed (ages 6 - 8 years), it was not available at the Clinic at the time that this study was planned. Rather than exclude these children, it was therefore decided to administer the NSAIS to them. Additionally, the intelligence tests were being used for the purposes of a screening device and not as an instrument for measuring change. Had they been used as instruments for measuring change, it would have been necessary to use a series of the same test to enable results to be compared.

The necessity to screen a large number of children precluded the general use of the NSAIS on the grounds of economy of time.

2.3.1.3 Personality Tests

2.3.1.3.1 Junior Eysenck Personality Inventory (JEPI)

This scale was designed to measure the two major personality variables of neuroticism (stability/emotionality) and extraversion/introversion, which have so often been discussed by Eysenck (Eysenck, 1960 - 1965). It has been constructed for the age range 7 - 16 and contains 60 items, of which 24 measure extraversion (E), 24 assess neuroticism (N) and 12 constitute the Lie (L) scale for the detection of faking. Each item has a forced choice 'yes' or 'no', examples of which are as follows:

Do you like plenty of excitement going on around you?

Are you moody?

Can you get a party going?

Have you ever told a lie?

Although the vocabulary of the test is carefully controlled, retarded readers may have difficulty with it. In this study it was therefore thought necessary to read the entire test to subjects.

When Eysenck put forward his view of personality along the dimensions of neuroticism and extraversion-introversion, a number of arguments arose over the discrepancy between his scheme and that of Cattell (1957). The controversy which ensued generated a large amount of investigation as to the reasons behind this disagreement. It was found that Eysenck's two factors are higher-order factors derived from the intercorrelations between oblique primary factors (Eysenck, 1960). These primary, or second-order factors, represent the dimensions of personality in Cattell's system. The difference then, does not lie in their basic view of personality structure, but rather in their factorial technique.

Having identified the two independent dimensions of personality, Eysenck set out to construct a scale for the measurement of neuroticism and extraversion. From his work, the Maudsley Personality Inventory (MPI) was published, a questionnaire validated on a number of occasions for hundreds of people. The revised MPI, now named the Eysenck Personality Inventory, was developed and the development of the JEPI was from the EPI. This development rested mainly with Sybil Eysenck.

In constructing the JEPI, Eysenck (1965) applied factorial methods. On the basis of factor analysis, 60 items were chosen from the original 108 items. The choice was based on the loadings of the items for their respective factors, and their lack of loading on other factors.

Standardization data for the E, N and L scales were derived from a large sample of school children, and final norms are listed according to age and sex. The standardization data of this test has shown certain interesting changes in scores on both E and N with age, and also some interesting sex differences. The trend for E is a regular increase for both sexes up to the age of 14, and a higher mean score at all levels for boys, significant beyond the ,001 level. N scores show that while boys and girls start out on much the same level, girls show a consistent increase with age, and boys, if anything, a slight decline. Sex, age and the sex by age interaction were all significant beyond the ,001 level.

Test/retest reliabilities for the scales average between 0,7 and 0,8. These were obtained on 1056 boys and 1074 girls, the time which elapsed between test and retest being one month.

Eysenck (1971) has stated that as little is known about the validity of the JEPI as yet, no claims can be made for its use other than as an instrument for experimentation. Preliminary testing at a child guidance clinic on 229 children has shown that the scale may have some validity in connection with clinical investigations (Eysenck, 1965).

Although the validity of the inventory remains in doubt, since relationships with teacher ratings of personality have tended to be low (Eysenck and Cookson, 1969), there is agreement among psychologists who have made extensive use of factor analysis in the field of personality. Thus, Adcock (1965) has shown that the findings of Cattell and Eysenck are similar at the level of the higher-order factors to which their data give rise. Cookson (1973) argued that the discrepancy between teacher ratings and the inventory results may be explained in terms of the inventory tapping certain aspects of personality of which the teachers may be unaware, as they do not manifest themselves in the classroom. This had lead Bennet (1973) to suggest that inventories be developed in which items can be answered with reference to specific situations.

In conclusion, the JEPI is one of the best known self-report personality inventories standardized on a British population (the language factor is therefore suitable for the population used in this study). It has undergone rigorous standardization and is cited by Chazan (1970) as suitable for screening and survey procedures with maladjusted children. It was therefore felt to merit inclusion in a battery of personality tests because of its suitability to this study.

2.3.1.3.2 Porter and Cattell's IPAT Children's Personality Questionnaire (The CPQ)

This test consists of 14 scales which measure a set of 14 distinct dimensions or source traits of personality. It was planned and based on extensive research to meet 3 requirements (Porter and Cattell, 1959):

- (i) To cover all the major dimensions involved in any comprehensive description of personality.
- (ii) To be used either as an individual or a group test.
- (iii) To deal with psychologically important traits of proved functional unity and relevance to general personality theory.

Although the vocabulary of the test is carefully controlled, retarded readers may have difficulty with it. In this study it was therefore thought necessary to read the entire test to the subjects.

The test provides two equivalent forms, Form A and Form B. The forms consist of 70 items (a total of 140 with both Form A and Form B), carrying 5 items for each of the 14 factors. The child is required to read a question and mark an 'X' on the side that 'fits you better', e.g. Would you like to play with mechanical toys ☐ or ☐ with friends? The test form may be used for re-testing after an interval of 3 weeks.

In constructing his personality inventories, Cattell applied factorial methods. Introduced by Spearman at the beginning of the century in the field of intellectual aptitudes, factor analysis, after refinement by Thurstone, has been widely applied in the field of personality in order to discover those traits which are fundamental. Used by many, including Guilford, Stephenson and

Eysenck, Cattell's formulations are generally regarded as the "most comprehensive and fully developed" (Hall and Lindzey, p. 380, 1970), although some still debate this.

Factorial method consists of the statistical analysis of the correlations between data. The scores from ratings, questionnaires and objective tests from a large sample on a number of personality traits, are intercorrelated and factor analysed, which has lead to the identification of what Cattell described as "the primary source traits of personality" (Anastasi, 1969). These basic factors are considered to account for the variation in the many initial scores. The 14 source traits in the CPQ are considered to be fundamental dimensions of personality and "all the factors so far confirmed in research at this age" (Porter and Cattell, 1959).

Reliability of the test has been considered in regard to four types of coefficients, the most important of which are the dependability (test-retest coefficient, without an interval) and the stability coefficients (test-retest coefficient, after an interval). They are shown in Table 16.

Table 16

Factor Scale Reliabilities: the Dependability
and Stability Coefficients

Reliability Coefficient	F A C T O R													
	A	B	C	D	E	F	G	H	I	J	N	O	Q3	Q4
Dependability Coefficient Form A and B	,76	,87	,69	,70	,80	,82	,74	,70	,86	,63	,82	,66	,69	,78
Stability Coefficient Form A and B	,75	,79	,52	,64	,71	,75	,65	,64	,73	,55	,83	,66	,70	,69

These coefficients are based on 260 boys and girls of 9 years of age in U.S. elementary schools. The stability coefficient is based on an 18 day interval (Porter and Cattell, 1959).

The lower stability coefficient is thought by the authors to reflect less on the reliability of the test itself than on the traits, which however well measured, fluctuate from day to day over a limited range. The difference of the stability coefficients from the dependability coefficients can be used to calculate the extent of function fluctuation in each trait.

Comparison of dependability and stability coefficients shows that a .09 or more difference exists between them for C, I, Q4, G and E, which means that these factors show appreciable variation over time. The authors state that this is generally in accordance with the relatively higher environmental determination found for these factors, the known short-term variation of C and Q4 with the level of the anxiety state, and the commonly observed variation on the elation-depression axis, as defined by F. The high fluctuation of G is not explainable on research results, and they feel that the present results may be exceptional.

The validity of a factor scale may be determined by the extent to which the scale score correlates with the pure factor which it claims to measure. The authors chose to call this concept validity. Calculating the concept validity in three different ways (by the multiple r of the 10 items in each factor with the pure factor; from the equivalence coefficient and from calculating a circumstantial validity), they found that the three approaches tended to agree on the order of validity of the scales, although the circumstantial validity calculation ran lower and was more

erratic than the other approaches.

The construct validity of a test may also be confirmed by correlations with specific performances, such as school achievement, recovery from delinquency, clinical diagnosis, etc. Since the CPQ is a relatively new test, not many such correlations are yet known, but research is expected to reveal these relations during the next few years.

More specifically, the CPQ has a weakness in that it has no built-in validity scales to assess lying, faking or some other motivational distortion. Although these measures are somewhat crude, they nevertheless help to decide whether an answer sheet should be rejected or in some cases, may be corrected. The Lie scale in the JEPI was derived for this purpose. Although no easy solution is possible to this problem, special care was taken in this study in an attempt to overcome this limitation. The subjects were told that it would be best to avoid misrepresentation. As a further safeguard, all subjects were closely watched for quick random responding, and each answer sheet was scrutinized for peculiar spatial irregularities that made no apparent psychological sense, e.g. the endorsement of only those responses on one side of the page or left-right alternating. It was hoped that by using these checks, distortion could be minimized.

The usefulness of a factor analysis approach to personality is that it has provided a "simple and lucid set of dimensions of factors" (Hall and Lindzey, 1958). Whilst certain personality theorists have arrived at their conceptions through a process which is largely intuitive, factor analysts have provided an objective and replicable procedure for the determination of underlying variables.

In addition to the 14 primary source traits measured by the CPQ, it is possible to obtain scores on broad, second-stratum traits (so named because they are found by intercorrelating and factoring primary traits) - notably anxiety and extraversion - by a combination of scores on the primary scales. The advantages in using these second-stratum factors are that the psychological concepts they represent have enjoyed more extensive research by a great number of investigators and as a result, are more familiar. In addition, there is an economy in dealing with only 2 scores rather than all 14 scales of the CPQ. However, these advantages are offset by a loss of information which is given when all 14 scales are used.

Despite the criticisms levelled at this test, it is one of the most widely used children's personality questionnaires and is considered by Savage (1966) as one of the best personality questionnaires available for children of this age group.

In general, the CPQ was chosen as one of the battery of personality tests used in this study because it was felt that it would fulfil the following purposes.

Firstly, it was hoped that the test's suitability for test/-retest would make it a valuable measurement of any changes brought about as the outcome of treatment procedures. For this purpose, second-stratum factors were used. Secondly, the test gives a wide spectrum approach to personality (14 primary and 2 secondary factors) and would thus provide valuable information concerning the subject's relative resources and strengths, an important aspect of assessment for therapy. The personality profile thus derived was used as a guide in the planning of a programme for those children in the Therapy groups.

2.3.1.3.3 Personal Adjustment Inventory by
Carl R. Rogers (ROGERS)

This inventory is a series of character and personality tests and aims to assess the extent to which a child is satisfactorily adjusted to his fellows, his family and to himself. Additionally it aims to provide information about the ways in which the child meets his difficulties, for example, "whether he covers his weaknesses by bragging, and attempts to bluff his way through life, or withdraws into himself, finding his satisfactions in a life of fantasy" (Rogers, 1961).

Although in general the inventory is intended for children who are chronologically from 9-13 years of age, Rogers states in the Manual that if the test is administered individually, the limits may be wider. In this study the inventory was administered individually to all those children below the age of 9 years, and because the child needs to be able to read at about the 9 year level to be able to follow the directions of this test, it was read aloud to all those children who appeared to have difficulty with the test.

The inventory consists of 6 different types of tests (see Appendix) and 4 diagnostic scores plus a total score are obtained from the responses: personal inferiority; social maladjustment; family maladjustment; daydreaming score (fantasy life). There are separate forms for boys and girls.

The test is made up of questions put in such form that responses are checked rather than written out. The questions attempt to cover in some degree, most of the areas of child life in which maladjustment is apt to occur.

The inventory was standardized on 52 'problem' children who had been referred to the Institute for Child Guidance, New York City, and 84 'normal' children. The norms, as Rogers himself

states, are not based on adequate numbers of children.

Test/retest reliability of the inventory, after an interval of a month, was measured on a group of 43 children in a private school. The reliability of the several diagnostic scores ranged from a correlation of ,65 to ,72. The reliability of the total scores was $r = ,719$, with a probable error of ,046. The reliability of this test, therefore, compares favourably with other tests of this sort.

Validity (correlation between the test and the ratings of clinicians) ranges between 0,38 and 0,43. Validity is therefore low and indicates that only cautious predictions should be made on the basis of this inventory.

The test is cited by Chazan (1970) as having proved of value to clinical workers. Rogers (1961) emphasizes that the numerical scores taken by themselves are not highly accurate, and might be misleading. They should only be interpreted after a study of the child's responses on the inventory, for a study of the responses of each individual child will help in understanding his personality and suggest ways of handling his behaviour.

The Rogers was included as one of the personality inventories in the battery for the following reasons.

It was hoped that the test's suitability for test/retest would make it a valuable measurement of any changes brought about as the outcome of treatment procedures and in addition, that it would provide valuable information concerning the areas of the child's life in which maladjustment may have occurred. It was therefore used as a guide in the planning of a programme for those children who were in the Therapy groups.

2.4 Equipment

The rooms which were used for the groups were at some distance from the office and waiting rooms of the Clinic. This tended to keep the location relatively free from distraction. The rooms were provided with blackboards, sandtrays, a library corner -- a table on which suitable books were attractively displayed -- and a table large enough to seat six people. Outdoor activities were held in a quadrangle in the building, or alternatively in a fenced-in playing field immediately adjoining the Clinic building.

A list of the equipment is included in the Appendix. A primary consideration in the ordering of most of the material was that it should be easily adaptable to a variety of needs.

Special mention is made here of the separate reading schemes which guided the procedure of the younger and older Remedial Reading groups.

2.4.1 Reading Schemes

2.4.1.1 "Sounds Travel Too" -- Sonia Machanick

This series of books was used in this study because it was felt that they would provide a framework within which the two therapists could plan remediation with their younger groups of Remedial Reading subjects. This would therefore act as a form of control in the method used. As the books are well illustrated, easy to follow and specifically planned for use with the remedial teaching of South African children, they are most suitable for this purpose.

A series of four readers (Books 1, 2, 3 and 4), they are predominantly phonic in their approach, but sight words are introduced at regular intervals.

Although the Reading Age of the children in remedial groups

may be at a level at which part of the material presented in Books 1 and 2 may be familiar, it is recommended that the pupils are nevertheless taken through these books from the beginning to assess and fill in gaps in their knowledge, and to check their understanding.

The books attempt to deal with those words the child is most likely to encounter. This is done by providing the training that will teach him the phonics and rules which do exist. A phonic word is only introduced to the child after he has learned all the sounds of which it is made up. Sight words are only introduced gradually when once a phonic vocabulary has been built up.

The procedure which is recommended in a lesson is:

- (i) For the child to look at the letter or word carefully to identify it.
- (ii) To read aloud the letter or word.
- (iii) To copy the letter or word in his exercise book.
- (iv) To write the sound of the letter or word to dictation.

The child is also expected to keep a special book in which new sight words are listed.

This was the procedure that was followed generally in the remediation of the children.

2.4.1.2 Science Research Associates (SRA) Reading Laboratory

The SRA kit consists of stories developed for, and grouped into grade levels. Each story includes a series of questions which can be used to assess the reader's comprehension of the story.

There are 15 cards at each of the levels, each level desig-

nated by a colour. The lower levels are equivalent to the colours orange, olive and blue, and it was these levels which were used for the children in the older remedial reading groups.

Although the laboratory is intended to be self-administrative, the reading material was adapted in the following way in this study.

The children alternated in choosing a story and then, under the supervision of the therapist, the story was read by the various group members. Each member read one paragraph at a time and then handed the card to the next member. If the child experienced difficulty with any of the words he was reading, he would ask the child on his right for help. The series of questions at the end of each story was used in the same way, with each child answering questions in rotation. The children kept a special book in which new words were listed. Any words which had presented difficulties for them were listed.

This kit was chosen because it provided material which was of interest to the children, and at gradually increasing levels of difficulty. It was used as a way of structuring the procedures of the male and female therapists with their older remedial reading groups. It was hoped that it would increase rate, accuracy and comprehension of reading, as well as vocabulary. Additionally, it gave diagnostic information on the child's reading difficulties, enabling the therapist to assess the different areas of reading skills in which the child needed extra practice and help.

2.5 General Procedure

The Experimental groups - Therapy and Remedial Reading groups - took part in testing sessions in which the CPQ, JEPI and ROGERS were administered. Considerations which had to be taken into account in administering these tests were: firstly, that the tests had to be administered to the children over as short a space of time as possible so that the time interval between initial testing and retesting was similar; secondly, that it was necessary to prevent fatigue and to ensure the continued co-operation of the child. The children were therefore brought into the Clinic and tested over successive days and the order of presentation was carefully planned.

The personality assessments, the family-social history taken from the parents and reports obtained from teachers, were used as a basis for the planning of group therapy goals and procedures to which the Therapy group was exposed over the following four months. During this period, the parents and teachers of this group were also seen.

The Neale, which had been administered during the selection procedure, was used as a basis for the planning of remedial procedures to which the Remedial Reading group was exposed over the following four months.

At the end of four months, all the subjects in both the Therapy and Remedial Reading groups were retested on the Neale, CPQ, JEPI and the ROGERS.

The Control group, which had been tested on the Neale during selection procedures, took part in testing sessions in which the CPQ, DEPI and the ROGERS were administered. They did not take

part in any treatment procedures and simply remained on the waiting list for four months. They were then retested on the Neale, CPQ, JEPI and the ROGERS.

The psychological tests were administered by clinical psychology graduate interns at the Clinic who were experienced in test administration.

Treatment procedures were undertaken by two clinical psychology graduate students, a male and a female, with comparable experience and training in child psychology, and in the applying of various techniques derived from established psychological principles for the purpose of assisting individuals. They will be referred to in this study as the male therapist and the female therapist.

The planning of treatment procedures was undertaken, in the main, by the female therapist (the writer), but at all times with the close assistance of the male therapist (M. O'Brien). Although an outline and general goals were decided upon for the procedures to be used for the different treatment groups, it is obvious that both therapists would have their own individual style. Each therapist worked with both Therapy and Remedial Reading groups. Regular meetings were arranged between the therapists in which matters pertaining to the groups were discussed.

Both therapists saw their particular groups of children at the Cape Town Child Guidance Clinic for one hour twice a week. This period of time was arranged during week days and after school hours.

The therapists also saw the parents and class teachers of those children who were in the Therapy groups. The parents and

teachers were seen separately as groups at more or less monthly intervals. These meetings were arranged in the evenings and held at the Clinic.

The procedures which were followed for the Therapy and Remedial Reading groups will be discussed under separate headings.

2.5.1 Therapy Procedure

In planning therapeutic procedures for those children assigned to the Therapy groups, this study was guided by Meltzoff and Kornreich's (1970) broad definition of psychotherapy, viz. that it is

"the informed and planful application of techniques derived from established psychological principles, by persons qualified through training and experience to understand these principles and to apply these techniques with the intention of assisting individuals to modify such personal characteristics as feelings, values, attitudes, and behaviours which are judged by the therapist to be maladaptive or maladjustive" (p.4).

It is obvious, therefore, that the approach used was very wide and included many approaches besides psychoanalysis.

In deciding on the areas of the child's life which should be the focus during treatment procedures, this study was guided by Ravenette's (1968) view that in approaching a child who is failing in reading, "his difficulties need to be seen in the context of his whole life and this includes his environment, his family, his special abilities, his previous encounters with the reading task, and his view of himself" (p.91).

The problem was therefore looked at from a broad frame of reference and a wide range of measures were considered in helping the child. Therapy procedures were therefore directed towards a wide number of areas in the child's life. These included:

relationships with peers, siblings and significant adults; hobbies and interests; attitudes towards school, reading and self; worries, fears, anxieties, expectations, beliefs, wishes; aspirations, immediate and long-term.

Many authors (Fraser, 1959; Goldberg and Shiffman, 1972; Ravenette, 1968) stress the important role of parents, particularly the father in the case of boys (Hall, 1968; Petersen et al, 1968), in contributing to the child's view of himself and his abilities, and consider this an important factor in scholastic failure. The parents of this group were therefore involved in an attempt to modify their attitudes towards, and expectations of the children.

Studies (Purkey, 1970; Rosenthal and Jacobson, 1968) have also shown the important influence which teachers' attitudes have for their pupils' attitudes, sense of security and self-esteem. It was therefore decided to involve the teachers of this group of children in an attempt to give them a sympathetic understanding of the children and enable them to assist the children by viewing them in more positive ways.

2.5.1.1 General Principles Guiding Therapy

In line with Graham's (1974) view that psychotherapy based on a psychoanalytical theoretical framework needs to be carefully combined with other approaches so that the needs of individual children can be met, this study accepted a broad approach to therapeutic procedures. The more positive aspects of traditional methods were combined with more recent contributions to therapy. The procedure and framework were therefore flexible and varied to the perceived moods and needs of the particular group. Non-directive play therapy, the release of emotions, the understanding

of behaviour, were combined with social learning experiences and behaviour modification techniques.

Because the purely verbal form of communication is limited in treating the younger child, there was a greater emphasis with the younger group on play and handicraft activities, which afforded the framework for communication. It was through these media that the child was able to display his typical attitudes to people, his behaviour and the way in which he would tackle a problem. The older group were better able to verbalize and discuss their problems.

The importance of the therapeutic relationship between the therapist and the child was recognized, as was the need to mobilize the positive expectations which the child may have when coming into treatment.

It was accepted that the peer group has considerable influence on the behaviour and thinking of the child within the group, and therefore that group learning among peers is a valuable ally when attempting to modify personal characteristics. The sharing and recognition of the group in any progress, however small, is often an effective reinforcer and was therefore mobilized whenever possible. The exchanging of ideas and sharing of experiences among group members was actively encouraged. There was an emphasis on group problem solving, with the group putting forward various solutions to problems and then discussing these.

In general, praise rather than punishment was used in working with the children. A relaxed, fairly permissive atmosphere was the aim in therapy sessions, in which the child would feel secure and free to express his ideas and feelings. At the same time,

reasonable graded demands were made for conformity, with the view that society does make certain demands on the individual which cannot be escaped without unpleasant consequences. Bearing in mind the social learning theory of Bandura and Walters (1964) and the role of imitation in the development of social behaviour, the tutors set the example of courteous consideration for others.

The therapists were alert to engineering opportunities which would involve the children in activities where their chances for success and a feeling of accomplishment were high, so that whenever possible realistic goals were set. Confidence was conveyed to the child in his ability to help himself and others.

2.5.1.2 Techniques Used During Therapy Sessions

In short, the techniques used were reassurance, suggestion, persuasion, counselling, re-education and inspiration.

The term re-education refers to the corrective experiences such as social learning experiences, which were attempted, as well as to verbal explanations.

Role playing techniques were used, with the children taking the roles of teacher, parents and siblings.

Behaviour therapy techniques were used (see Appendix), as were techniques directed towards bringing about group cohesion.

The following sections, which describe the procedure followed with the children in the therapy groups in finer detail, also serve to illustrate the techniques used and to show how they were combined to bring about particular aims.

2.5.1.3 Group Goals

The broad aim set for this group was the improvement of the children's

reading skills by means of the following more specific aims:

- (i) To improve the child's view of reading - getting him to view reading as a pleasurable pursuit and as a value.
- (ii) To get the child to commit himself to trying to improve these skills.
- (iii) To improve the self-esteem of the child - to make him feel that he is accepted in his own right as a person.
- (iv) To improve the child's interpersonal relationships - to help him to understand his own behaviour and the behaviour of others; to help him to understand the effect that his behaviour has on others.
- (v) To improve the opinions and attitudes of the parents towards the child.
- (vi) To improve the opinions and attitudes of the teachers towards the child.

2.5.1.4 Outline of Procedure in the Initial Stages of Treatment

In general, the procedures adopted tended to be flexible and varying, whereas in the initial stage the framework was fairly structured. What follows is a brief outline which will serve to illustrate the approach and some of the techniques used.

When the groups first met, attempts were made to put the group members at ease and make them feel secure. The therapists introduced themselves and explained their own role as that of an ally of the children. Members were introduced by the therapist saying, "Most of us can feel a little better when we learn to share, that is, talk out some of our troubles. This is possible in here. Shall we introduce ourselves now and begin by telling a little about ourselves."

114

Discussion then centred around why they were there, how they felt about it, what they felt they could do about their problems and how they felt the therapist could help. It was considered necessary at an early stage, to get the members to discuss and commit themselves to an aim for the group. This was seen by them basically, as a group in which members would try and help themselves and the others with problems encountered in everyday living. In particular, they saw the focus as being on school and reading difficulties.

The limits of group sessions were explained. They were told that although they were free to express any feelings, there were certain limits on freedom of action. It was also pointed out that all members would have certain responsibilities for tidying away materials.

Techniques were used in an attempt to bring about feelings of group solidarity so that membership in the group would be valued. Group problem solving was fostered, with all members being encouraged to contribute in some measure. For example, it was suggested that the group should have a name and its own emblem. Each member was encouraged to contribute ideas, and these were then discussed and a name decided upon. The feelings of some members regarding their own abilities may be gauged from the initial suggestion of one enthusiastic member who suggested that their group be called the 'Five Dunces'. The designing and drawing of emblems was then used as a group project, with each child making some contribution.

2.5.1.5 Later Stages

As therapy sessions progressed and the members become more relaxed and secure, the various aforementioned areas of the children's lives were explored. The procedure and techniques used tended to vary according to the needs and moods of the children in the particular groups. Included in the Appendix are examples of a group project which evolved almost spontaneously from group discussion. It serves as another example of the general approach of therapy procedures and illustrates how a particular activity could be used to fulfil a number of interrelated individual and group aims. Also included in the Appendix is a type of behaviour therapy technique which was found to be suitable for use with the children.

Mention should be made that this group were not given direct remedial help with their reading difficulties. However, the 'library corner' in which books arranged according to reading levels were displayed, was at the disposal of these children, as well as those in the remedial groups. They were allowed to borrow the books and if members wished to share the stories they had read with other members, they were encouraged to do so. This had the effect of stimulating interest in the 'library' and motivating others to borrow books.

Particular care was taken in preparing the group for the termination of therapy sessions.

2.5.1.6 Parent Groups

The parents of the male therapist's therapy group were seen separately as a group by the male therapist. The parents of the female therapist's therapy group were seen separately as a group by the female therapist.

The meetings were conducted in a relaxed, non-directive fashion and aimed to enlist the parents' co-operation, with an emphasis on encouraging rather than teaching the child.

The parents were encouraged to solve problems such as, "How do I encourage my child to do his homework?" by group discussion. In the discussion the parents were encouraged to focus on what can be done, rather than on what has been done wrongly.

The therapists gave information when requested and helped with practical problems such as homework, motivation, the setting of realistic goals and the encouragement and support of the children.

Various topics were discussed, with the role of the parent being defined as follows:

- (i) To foster an interest in reading. Suggestions raised were: to encourage the child to join a library; to provide the child with interesting literature at his reading level, rather than at or above frustration level; to read to the child.
- (ii) To listen to the child.
- (iii) To encourage the child to assume responsibility. Suggestions raised were: to encourage the child to dress himself; to tidy his room; to run errands, and in general, that reasonable graded demands for conformity should be made.

One of the main aims of these meetings with the parents was to help them to understand the child's problem, and the type of problems that the child with a reading difficulty will face at school. It was an attempt to give the parents an empathy for the child and to view him in a more positive light.

2.5.1.7 Teacher Groups

The groups of those children who were attending therapy sessions which were arranged for the class teachers, were conducted in a similar way to the groups that were arranged for the parents.

The procedure and general approach which has been described above under the heading 'Parent Groups' would therefore apply in the main, for the teacher groups, and reiteration is therefore unnecessary.

2.5.2 Remedial Reading Procedure

2.5.2.1 General Principles Guiding Procedure

In selecting the remedial reading methods used in this study, an attempt was made to select methods which would be suitable for remedial work, rather than developmental reading methods meant for use in the regular classroom. Methods had to be selected which would require no special training for the therapist, but would be acceptable as remedial techniques.

It was necessary to structure the procedure to some extent in order that the procedure carried out by the therapists would be similar. As the therapists were working with groups of children who had different RA's, and considering that a method which is appropriate for a child at one age becomes inappropriate for him at another age, it was decided to use 'Sounds travel too' (Machanick, 1969) for the younger remedial groups, and the SRA Reading Laboratory (Parker, 1957) for the older remedial groups. Both are fully discussed in an earlier section under the heading 'Equipment', where the way in which they were used is also discussed.

Guiding the procedure in the initial stage was an evaluation of the child's reading performance based on the results of the

NEALE and the supplementary diagnostic tests of the NEALE. These tests gave an indication of the specific skill deficiencies of the child and the possibilities of relating teaching to these difficulties. As treatment proceeded, the tasks and material that were presented were modified on the basis of the children's performance. This was done at both the group and individual level. One of the reasons for doing this was to try and implement learning experiences in which the child would have reasonable success in as many of his responses as possible, to prevent negative learning and confusion, as well as damage to confidence and motivation. Attempts were made to make the material presented as meaningful as possible to the children.

The emphasis with the younger children was on developing the skills necessary in the mechanics of reading, that is, on the strategies needed for deciphering words by phonic analysis and acquiring a sight vocabulary. With the older children, although the skills required in the mechanics of reading were developed, there was a greater emphasis given to the reading comprehension skills; the acquisition of vocabulary and the grasping of meaning of longer passages. The language-experience approach was used with both groups.

Interest, praise and encouragement were shown whenever possible, especially if a child appeared to show genuine effort. The children were given regular feedback on how they were progressing and reminded of the progress that they had made. Attempts were made to make the procedures as pleasant as possible.

The sessions which the children attended were divided into short learning periods so that, for example, readers would be alternated with story telling, skill building games and language-

experience approach.

2.5.2.2 Aims

The general aim was to improve reading skills. This involved a number of more specific goals.

- (i) To improve the mechanics of reading and extend the sight vocabulary. This was attempted by methods and techniques directed towards developing the deficient phonic-analysis skills of the child, for example, letter sounds, initial blends, regular single syllable phonic words, irregular forms such as long vowels, as well as a sight vocabulary.
- (ii) To provide success with meaningful interesting material. Children were provided with material at their reading level and use was made of self-made, interest-based material (language-experience approach). They were prepared for the content of any story, the meanings of new words were given and stressed and with the younger children, careful attention was given to details within a word.
- (iii) To encourage children to read on their own. This was attempted by making the children aware of and interested in books and what they contain. Considering that the act of reading is reinforced by the child's success in reading, the children were encouraged to read books at or below their RA by using such devices as asking them to look up information for their story books (described later), or by starting to read a story and then not finishing it.
- (iv) To develop and improve listening skills. This was done by techniques such as reading a story and then getting the children to discuss what had been read.
- (v) To improve oral and silent reading. For this, oral and silent reading of materials at the

children's RA level was provided.

- (vi) To develop and improve comprehension skills.

As comprehension depends not only on language, but also a degree of fluency in reading, the development of this aim is covered by the aims which precede it.

2.5.2.3 Procedure with the Younger Remedial Reading Groups

The 'Sounds travel too' series of readers were used by the therapists as a guide for the systematic sequential presentation of the sound elements to be learned and as material for reading practice. This series starts with a few letters and those that are distinguished easily from each other. It includes letter sounds, sound blending, sounding out words, learning sight words, and reading simple sentences. A list of new words was kept by the children and work that had been covered was frequently revised.

Aids were used to utilize the skills that the child had already learned and to give him practice in these skills. The aids included flashcards, word building games and activities. Examples of the type of games used, as well as a list of some of the aids, are included in the Appendix.

The language-experience approach was used in the following way.

The children made their own reading books. They were asked to tell a series of stories about any subject or experience in which they were interested. This was written out by the therapist, using the same words as the child had used. The child would then copy this story into his book, often illustrating the story by his own drawings or pictures cut out from magazines. When finished, the child would read his story to the rest of the group.

2.5.2.4 Procedure with the Older Remedial Reading Groups

The SRA reading laboratory was used by the therapists as a guide for the systematic presentation of material to be learned and as material for reading practice. As mentioned earlier, a full discussion of the way in which this was used is given in the section headed 'Equipment'.

Aids to utilize the skills that the child had already learned and to give him practice in these skills, were also used with this group.

The language-experience approach which was described in the procedure with the younger children, was used with this group, although it was found that this group were often able to dictate their stories with the use of a tape recorder, so that the therapist was then able to prepare these stories after hours for copying by the children.

2.5.2.5 Further Treatment of the Children in Remedial Reading and Therapy Groups

It should be mentioned that if, at the end of the experimental period, any of the children required further treatment, for example, to have further remedial help with their reading difficulties, they were referred on to the relevant professionals.

2.6 Statistical Analysis of Data

The results will be described separately as they relate to:

- (i) Remedial reading, therapy and control groups.
- (ii) Male therapist and female therapist groups.

The data which was used was pre/post test difference scores, that is, the difference between the subjects' initial scores and their scores at the end of the experimental period.

For the statistical analysis of data concerned with the effects of treatment on the Experimental groups and the Control group, use was made of one way analysis of variance and t tests.

Calculations were performed on a university computer - UNIVAC 1106 time sharing system - at the computer centre of the University of Cape Town. A biomedical computer programme (BMD0IV) for analysis of variance for one way design was used.

For the statistical analysis of data concerned with the effects of treatment on the male therapist and female therapist groups, use was made of t tests. One way analysis of variance was not used because there were only two groups.

3. RESULTS

3.1 Experimental and Control Groups

It was first necessary to determine whether the Experimental and Control groups differed with regard to important variables. Computed means and standard deviations for the remedial reading, therapy and control groups on the variables of CA, IQ, RAQ (Reading Achievement Quotient) and RA are summarized in Table 17.

Table 17

CA, IQ, RAQ and RA Means and Standard Deviations of Remedial Reading, Therapy and Control Groups for Analysis of Variance

Variable	Remedial Reading Group		Therapy Group		Control Group	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
CA	9,72	1,32	9,99	1,03	9,63	,88
IQ	104,6	10,18	102,68	9,58	99,8	9,87
RAQ	79,68	7,13	79,68	6,75	80,9	5,03
RA	8,02	,78	8,2	1,16	7,85	,93

The groups were then compared for possible significant differences in CA, IQ, RAQ and RA between the groups. Analyses of variance were therefore computed and the results are summarized in Tables 18 to 21.

Table 18

Summary Scores on CA Variable

Source	SS	DF	MS	F
Between groups	1,38	2	,69	,58
Within groups	66,67	56	1,19	

Table 19Summary Scores on IQ Variable

Source	SS	DF	MS	F
Between groups	233,5	2	116,75	1,19
Within groups	5474	56	97,75	

Table 20Summary Scores on RAQ Variable

Source	SS	DF	MS	F
Between groups	19,37	2	9,69	,24
Within groups	2216	55	40,29	

Table 21Summary Scores on RA Variable

Source	SS	DF	MS	F
Between groups	1,21	2	,6	,46
Within groups	146,39	56	1,3	

These results show that there were no significant differences between the means of the remedial reading, therapy and control groups, and they were therefore matched with respect to CA, IQ, RAQ and RA.

3.2 Experimental Groups : Male Therapist's Groups and Female Therapist's Groups

To determine whether the male and the female therapist's groups differed with regard to important variables, means and standard deviations were computed for the male therapist's therapy and remedial reading groups and the female therapist's therapy and remedial reading groups on the variables of CA, IQ, RAQ and RA. These are detailed in Table 22.

Table 22

CA, IQ, RAQ and RA Means and Standard Deviations of
the Male and Female Therapist's Therapy and Remedial
Reading Groups for Analyses of Variance

GROUP	V A R I A B L E S							
	CA		IQ		RAQ		RA	
	X	SD	X	SD	X	SD	X	SD
THERAPY GROUP								
Male Therapist	9,53	1,01	100,78	7,66	81,44	4	7,78	1,05
Female Therapist	10,41	,88	104,4	11,16	78,1	8,42	8,57	1,13
REMEDIAL READING GROUP								
Male Therapist	10,43	1,15	106,7	11,58	76	8,43	8,35	,86
Female Therapist	9,01	1,10	102,5	8,66	83	3,56	7,69	,56

The groups were then compared for possible significant differences in CA, IQ, RAQ and RA by means of a series of 2 x 2 analyses of variance, the results of which are summarized in Tables 23 to 26.

Table 23Summary Scores on CA Variable

Source	SS	DF	MS	F
Therapist (A)	,70	1	,70	,64
Group (B)	,60	1	,60	,55
A + B	12,89	1	12,89	11,82 **
Within (Error)	38,16	35	1,09	
** p < ,01				

Table 24Summary Scores on IQ Variable

Source	SS	DF	MS	F
Therapist (A)	,91	1	,91	9,19
Group (B)	39,45	1	39,45	,39
A + B	148,76	1	148,76	1,49
Within (Error)	3472,56	35	99,21	

Table 25

Summary Scores on RAQ Variable

Source	SS	DF	MS	F
Therapist (A)	31,60	1	31,60	,74
Group (B)	,67	1	,67	1,56
A + B	253,46	1	253,46	5,95 **
Within (Error)	1449,12	34	42,62	

** $p < ,05$

Table 26

Summary Scores on RA Variable

Source	SS	DF	MS	F
Therapist (A)	3,15	1	3,15	1,45
Group (B)	,87	1	,87	,40
A + B	14,67	1	14,67	6,78 **
Within (Error)	77,9	36	2,16	

** $p < ,05$

These results show that there is no overall significant difference between the male the female therapist's groups. They were therefore matched for CA, IQ, RAQ and RA.

There was, however, a significant difference between the male and female therapist's therapy groups and the male and female therapist's remedial reading groups at $p < ,01$ level for the CA factor, and at the $p < ,05$ level for RAQ and RA. The male therapist's therapy group was younger ($\bar{X} = 9,53$) and had a lower RA ($\bar{X} = 7,78$), and higher RAQ ($\bar{X} = 81,44$) than the female therapist's therapy group which was older ($\bar{X} = 10,41$), had a higher RA ($\bar{X} = 8,57$) and lower RAQ ($\bar{X} = 78,1$). The reverse occurred with the remedial groups in which the male therapist's group was older ($\bar{X} = 10,43$),

had a higher RA ($\bar{X} = 8,35$) and a lower RAQ ($\bar{X} = 76$), whilst the female therapist's group was younger ($\bar{X} = 9,01$), had a lower RA ($\bar{X} = 7,69$) and higher RAQ ($\bar{X} = 83$).

These results show that it will be possible to compare the observations from the male therapist's total groups (remedial reading and therapy) with those of the female therapist's total groups (Remedial reading and therapy), thereby assessing the effect of the therapist on treatment, irrespective of type.

3.3 Results from the Analysis of the Data from the Experimental and Control Groups

The differences between the subjects' initial scores and their scores at the end of the experimental period (pre/post test difference scores) were computed for the subjects in the remedial reading, therapy and control groups from the results of the NEALE, CPQ (Anxiety and Extraversion factors), JEPI (E, N and L Scales) and ROGERS (Daydreaming, Personal Inferiority, Family Relationships, Social Inferiority and Total scores). This data is given in Appendix B.

3.3.1 Reading Achievement

To determine whether the Experimental and Control groups differed with regard to gains in reading achievement measures, means and standard deviations were computed for the remedial reading, therapy and control groups on the NEALE pre/post test difference scores. These are detailed in Table 27.

The individual pre/post test difference scores on the NEALE of the subjects in the remedial reading, therapy and Control groups are diagrammatically represented in Figure 1.

Pre/post Test Scores on the NEALE Test for
the Individual Subjects of the Remedial
Reading, Therapy and Control Groups

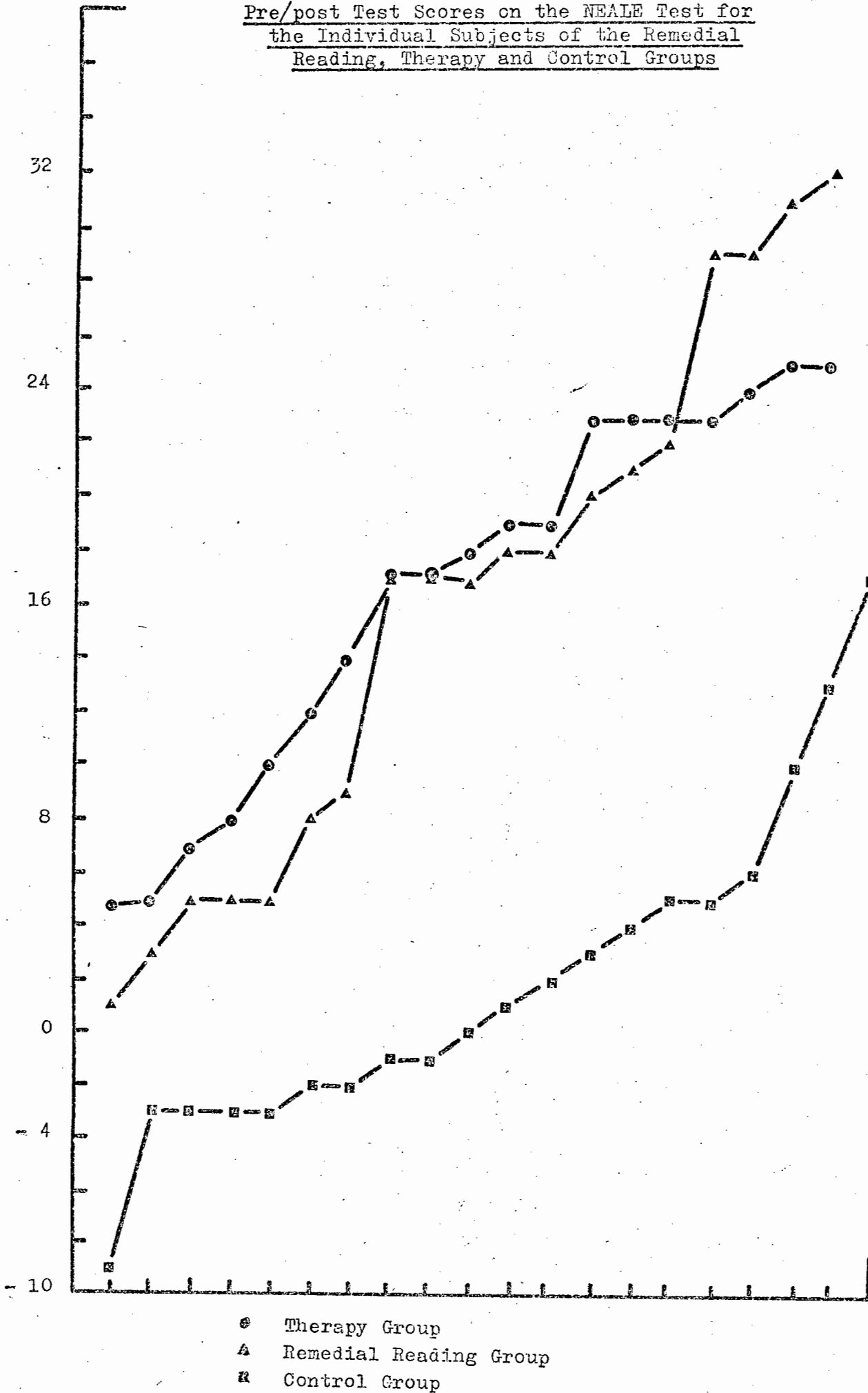


Table 27

NEALE Difference Between Pre and Post Test Score, Means
and Standard Deviations of Remedial Reading, Therapy
and Control Groups for Analysis of Variance

Remedial Reading Group		Therapy Group		Control Group	
Mean	SD	Mean	SD	Mean	SD
16,50	9,72	17,47	8,53	1,95	6,18

The groups were then compared for possible significant differences by means of one way analysis of variance, the results being summarized in Table 28. The assumption made in using the one way analysis of variance is that (a) all observations are normally distributed and (b) all the observations have the same variance. This assumption of homogeneity of variance among normally distributed observations was tested using the test statistic $\frac{s_{\max}^2}{s_{\min}^2}$ (Pearson and Hartley, 1962). This showed no significant difference between the variance.

Table 28

Summary Scores on the NEALE

Source	SS	DF	MS	F
Between groups	2993,48	2	1496,74	21,89 **
Within groups	3828,69	56	68,37	
Total	6822,17	58		
** $p < ,01$				

These results show that there was a significant difference between the groups at the $p < ,01$ level.

A t test indicated that there was no significant difference between the means of the pre/post test difference scores of the

remedial reading and the therapy groups. Both however, differ significantly from the control group.

These results show that the null hypothesis stating that those retarded readers in the therapy group and the remedial reading group will not show greater gains in reading achievement on the criterion test than those retarded readers in the Control group, should be rejected. The means of the remedial reading and therapy groups differed significantly from the Control group mean at the $p \leq .01$ level.

The null hypothesis stating that those retarded readers in the therapy group will not show greater gains in reading achievement on the criterion test than those retarded readers in the remedial reading group, must be retained.

Therefore, both Experimental groups showed significantly greater gains in reading achievement than the Control group, but there was no significant difference in gains in reading achievement between the remedial reading and therapy groups.

3.3.2 Personality and Adjustment

To determine whether the Experimental and Control groups differed with regard to gains in personality and adjustment measures, means and standard deviations were computed for the remedial reading, therapy and Control groups on pre/post test difference scores on the CPQ (Anxiety and Extraversion factors), JEPI (E,N and L Scales) and ROGERS (Daydreaming, Personal Inferiority, Family Relationships, Social Inferiority and Total scores). These are detailed in Tables 29 to 31.

Table 29

Means and Standard Deviations of Remedial Reading,
Therapy and Control Groups on CPQ Pre/Post Test
Difference Scores for Analysis of Variance

Factors	Remedial Reading Group		Therapy Group		Control Group	
	Means	SD	Means	SD	Means	SD
Anxiety	- ,10	13,32	- ,47	11,57	,80	14,25
Extraversion	- ,03	1,31	,00	1,25	- ,25	1,49

Table 30

Means and Standard Deviations of Remedial Reading,
Therapy and Control Groups on JEPI Pre/Post Test
Difference Scores for Analysis of Variance

Scale	Remedial Reading Group		Therapy Group		Control Group	
	Means	SD	Means	SD	Means	SD
E	,00	3,31	-1,00	5,39	,05	3,22
N	- ,8	4,98	-2,6	6,33	-2,35	3,95
L	- ,05	2,54	,05	3,00	,00	3,34

Table 31

Means and Standard Deviations of Remedial Reading,
Therapy and Control Groups on ROGERS Pre/Post Test
Difference Scores for Analysis of Variance

Item	Remedial Reading Group		Therapy Group		Control Group	
	Means	SD	Means	SD	Means	SD
Daydreaming	-1,55	3,22	- ,84	3,59	,85	3,26
Personal Inf.	,00	6,63	-1,47	4,23	1,10	5,63
Family Rel.	,15	5,02	-1,00	4,46	- ,55	6,06
Social Inf.	- ,80	7,96	-1,10	7,82	-1,10	5,30
Total	-3,05	12,82	-6,63	11,19	- ,10	9,38

The groups were then compared for possible significant differences by means of a series of one way analyses of variance for each of the CPQ, JEPI and ROGERS factors. The results are summarized in Tables 32 to 41.

Table 32

Summary Scores on the Anxiety

Factor of the CPQ

Source	SS	DF	MS	F
Between groups	16,84	2	8,42	,05
Within groups	9639,74	56	172,14	
Total	9656,57	58		

Table 33

Summary Scores on the Extraversion

Factor of the CPQ

Source	SS	DF	MS	F
Between groups	,73	2	,36	,20
Within groups	102,90	56	1,84	
Total	103,62	58		

Table 34

Summary Scores on the E Scale of the JEPI

Source	SS	DF	MS	F
Between groups	13,56	2	6,78	,41
Within groups	928,95	56	16,59	
Total	942,51	58		

Table 35

Summary Scores on the N Scale of the JEPI

Source	SS	DF	MS	F
Between groups	39,87	2	19,94	,075
Within groups	1477,86	56	26,43	
Total	1519,73	58		

Table 36Summary Scores on the I Scale of the JEPI

Source	SS	DF	MS	F
Between groups	,10	2	,05	,00
Within groups	497,90	56	8,89	
Total	498,00	58		

Table 37

Summary Scores on the Daydreaming
Score of the ROGERS

Source	SS	DF	MS	F
Between Groups	60,72	2	30,36	2,69
Within groups	632,03	56	11,29	
Total	692,74	58		

Table 38

Summary Scores on the Personal Inferiority
Score of the ROGERS

Source	SS	DF	MS	F
Between groups	64,85	2	32,43	1,03
Within groups	1762,53	56	31,47	
Total	1827,39	58		

Table 39

Summary Scores on the Family Relationships
Score of the ROGERS

Source	SS	DF	MS	F
Between groups	13,14	2	6,57	,24
Within groups	1533,50	56	27,38	
Total	1546,64	58		

Table 40

Summary Scores on the Social Inferiority
Score of the ROGERS

Source	SS	DF	MS	F
Between groups	1,21	2	,60	,01
Within groups	2838,77	56	50,69	
Total	2840,00	58		

Table 41

Summary Scores on Total Score of the ROGERS

Source	SS	DF	MS	F
Between groups	416,39	2	208,19	1,65
Within groups	7049,17	56	125,88	
Total	7465,56	58		

The results of these analyses of variance indicate that there was no significant difference between the means of the groups on any of the measures used, and therefore the null hypotheses should be retained for all these analyses. The null hypotheses stating (a) that those retarded readers in the therapy group and the remedial reading group will not show greater gains in personality and adjustment as reflected on criterion measures than those retarded readers in the Control group and (b) that those retarded readers in the therapy group will not show greater gains in personality and adjustment as reflected on criterion measures than those retarded readers in the remedial reading group.

3.4 Results from the Analysis of the Data from the Male Therapist's and the Female Therapist's Groups

The differences between the subjects' initial scores and their scores at the end of the experimental period (pre/post test difference scores) were computed for the subjects in the male

therapist's and the female therapist's groups from the results of the NEALE, CPQ (Anxiety and Extraversion factors), JEPI (E, N and L Scales) and ROGERS (Total). This data is given in Appendix B.

3.4.1 Reading Achievement

To determine whether the male therapist and female therapist groups differed with regard to gains in reading achievement measures, means and standard deviations were computed for the NEALE pre/post test difference scores. They are detailed in Table 42.

Table 42

Means and Standard Deviations of the Male
Therapist's and Female Therapist's Groups
on NEALE Pre/post Test Difference Scores

Group	N	Means	Standard Deviation
Male therapist	19	13,21	7,18
Female therapist	20	20,55	9,35
t = 2,74		p < ,01	

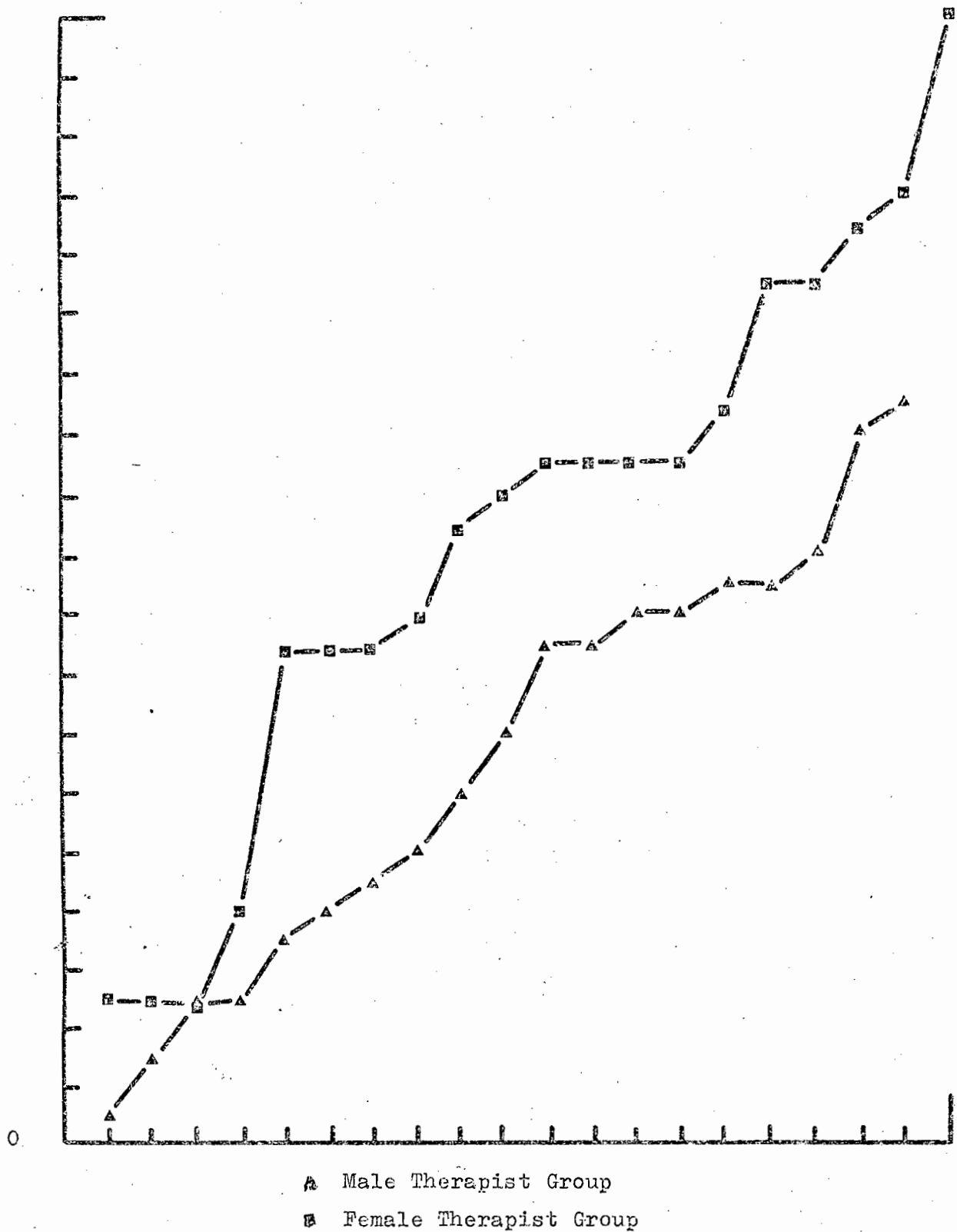
This table shows that the t test indicated that there was a significant difference between the means of the pre/post test difference scores of the male therapist and female therapist groups, a difference which is significant at the $p < ,01$.

The individual pre/post test difference scores on the NEALE of the subjects in the male therapist and female therapist groups are diagrammatically represented in Figure 2.

These results show that the null hypothesis stating that those retarded readers in the male therapist's groups will not show greater gains in reading achievement on the criterion test than those retarded readers in the female therapist's groups, should be

FIGURE 2

Pre/post Test Scores on the NEALE Test for
the Individual Subjects of the Male and
Female Therapist Groups



rejected. The means of the two different therapist groups were significantly different at the $p ,01$ level. Thus the female therapist's group showed significantly greater gains in reading achievement than the male therapist's group.

3.4.2 Personality and Adjustment.

To determine whether the male therapist and female therapist groups differed with regard to gains in personality and adjustment measures, t tests were performed on the pre/post test difference scores of the CPQ (Anxiety and Extraversion factors), JEPI (E, N and L Scales) and ROGERS total scores.

t Tests indicated that there were no significant differences between the means of the pre/post test difference scores of the male therapist and the female therapist groups on personality and adjustment measures.

These results show that the null hypothesis stating that those retarded readers in the male therapist's group will not show greater gains in personality and adjustment as reflected on criterion measures than those retarded readers in the female therapist's group, must be retained.

3.5 Results from the Analysis of Data from the Experimental and Control Groups and Male and Female Therapist Groups on Reading Achievement

The pre/post test difference scores means on the NEALE after 4 months of the experimental period, and the mean reading achievement after 1 month of the experimental period for the different groups are detailed in Table 43.

Table 43

Pre/post Test Difference Scores Means on the NEALE
after 4 MONTHS and the Mean Reading Achievement
per 1 Month of Treatment Scores

Group	4 Months $\bar{X}$	1 Month $\bar{X}$
Remedial reading group	16,50	4,12
Therapy group	17,47	4,36
Control group	1,95	,48
Male therapist group	13,21	3,3
Female therapist group	20,55	5,13

DISCUSSION

4. DISCUSSION

4.1 Efficacy of Group Therapy and Remedial Reading with Retarded Readers

4.1.1 Reading Attainment

As has been demonstrated in Table 28, there was a significant improvement in the reading attainment of those children in the remedial reading and therapy groups when compared to the Control group. There was however, no significant difference between the children in the remedial reading group and the therapy group with regard to improvement in reading attainment. This conflicts with the findings of Lawrence (1971), who found that counselling with or without remedial reading, brought about significantly better reading improvement than remedial reading alone. The inadequacies of Lawrence's study, however, have already been described in the introduction.

The finding that the group of children who were receiving the traditional remedial teaching of reading showed significantly greater gains in reading achievement when compared with the children in the Control group who were receiving 'no treatment', is in accordance with the findings of Birch, (1948/49), Collins (1961), Cashdan, Pumfrey and Lunzer (1971) and Lawrence (1971). This finding conflicts with those of Cashdan and Pumfrey (1969).

A further finding of this study, that is, that a therapy type approach to the treatment of retarded readers effected significantly greater improvement in reading attainment when compared with children in the Control group who were receiving 'no treatment', is similar to the findings of Axline (1947b); Bills (1950a), Fisher (1953) and Lawrence (1971 and 1972), but conflicts with

the findings of Bills (1950b), Elliott and Pumfrey (1972) and Lawrence and Blagg (1974). The inadequacies of these studies have already been described in the introduction.

As indicated in Table 43, the children in both the remedial reading and therapy groups achieved on average just over four months gain in reading attainment per month of treatment. Although allowance has to be made for the fact that the children were older, it is nevertheless a larger gain than those reported in such studies as Birch (1948/49), Collins (1961), Cashdan, Pumfrey and Lunzer (1971) and Lawrence (1971 and 1972). The results of these studies show gains of two to three months of RA per month of treatment. The difference between the results of these studies and the present study may be explained in part by the following.

Firstly, children who took part in this study came from a highly selected population with regard to the following factors:

(i) As Table 2 shows, the children represented socio-economic classes II, III and IV, with the majority of them falling within class III. They therefore represented a White middle-class population and it can be assumed that the children from this population would not usually be deemed to be deprived in terms of their nutritional and experiential environment, factors which have been shown to impair intellectual development (Birch and Gussow, 1970; Haywood, 1967; Rutter, 1972).

(ii) One of the primary selection criteria used in this study was that the children should have a full scale IQ of 85 or above. Selection of the children was therefore based on verbal as well as non-verbal abilities. In the main, these abilities were

were assessed by means of group intelligence test (NSAGT). The inclusion of verbal abilities in the assessment of intelligence, as well as the use of this type of test, would tend to penalize the child with reading difficulties, and would therefore tend to underestimate the level of intellectual functioning as measured by the test. The children were therefore of at least average to above average intelligence. As a group they had a mean IQ which was roughly similar to the general population, as shown in Table 8.

(iii) Not only were these children selected on the basis of total IQ, but additionally they were selected on the basis of RAQ, which utilized the ratio between the child's mental age and his reading achievement age, a measure used to assess under-achievement, and as discussed in the introduction, a technique which has been objected to on statistical grounds because it does not take into account the 'regression effect' (e.g. Crane, 1959; Burt, 1959; Ravenette, 1961; Yule, Rutter, Berger and Thompson, 1974). The assumption in using this technique is that on average, the achievement age and mental age of the child should be exactly comparable.. However, whenever the correlation between measures is less than perfect, there is a regression towards the mean (Thorndike, 1963). That is to say, those children who are well above average on a measure of intelligence, will tend to be less superior on a measure of reading achievement, and those who are well below average on an intelligence measure, will tend to be less inferior on a reading achievement measure. Only in the middle of the distribution will the two be the same. Using a RAQ would have the effect of overestimating the number of 'under-achievers' in children of high IQ, and under-estimating the same in children of low IQ.

The mean IQ's of the groups of this study were therefore higher than the other studies cited, for example, Cashdan, Pumfrey and Lunzer (1971) and Lawrence (1971 and 1972). Findings have differed in relating IQ to improvement in reading attainment (Cashdan, Pumfrey and Lunzer, 1971; Lytton, 1967). It is therefore suggested that the above-mentioned factors must be taken into consideration when comparing the mean gains of the treatment groups in this study with those of other studies.

Secondly, as can be seen in Table 17, the children's mean chronological age was 9,7 years and their mean reading age was 8 years; they were therefore 1,7 years behind on average. The children who took part in this study were therefore on average, not as retarded ($\bar{X}$ CA - RA) as the children reported in other studies, for example, Cashdan and Pumfrey (1969); Cashdan, Pumfrey and Lunzer (1971) and Lawrence (1971 and 1972).

Furthermore, in attempting to compare the results of this study with those studies described in the introduction which have attempted to evaluate the effects of the remedial teaching of reading, or the effects of a therapeutic type approach to the retarded reader, or attempted to compare the effects of a therapeutic type approach with the results of a traditional remedial reading approach (Lawrence, 1971), attention must be drawn to the following.

This study was designed in an attempt to overcome many of the objections which have been raised to previous studies of outcome research, and which were discussed in the introduction (Carroll, 1972; Meltzoff and Kornreich, 1970; Pumfrey and Elliott, 1970; Rosenthal and Frank, 1956; Strupp and Bergin, 1969). Amongst other things, this study has therefore

(i) Attempted to use a larger sample size. This has presented difficulties when one is dealing with a relatively small clinic population, and having 20 children in a group can clearly not be considered a 'large' sample. Nevertheless, the number of children that were used in this study is larger than similar studies, for example, Lawrence (1971, 1972 and 1974).

(ii) Included both Experimental groups and a Control group.

(iii) Clearly specified the criteria for selection of the children.

(iv) Randomly assigned the children to the treatment and Control groups.

(v) Controlled the important variables of CA, IQ and RA which might affect outcome.

(vi) Spread therapist effect over both treatments in an attempt to control for therapist effect.

(vii) Attempted to control certain therapist variables such as length and type of experience and training, and social, ethnic and cultural background.

(viii) Controlled for the length of time between testing, frequency of testing and also, on the measure used for reading attainment, controlled for practice effects by using different but equivalent forms for the pre/post test measures.

(ix) Controlled for the size of the group in which the children were treated.

(x) Taken into account the socioeconomic status of the children. Although not specifically controlled, it was found

that the children in the different groups were comparable with regard to this factor.

(xi) Specified, as far as was possible, the procedures which were used with the remedial reading groups and with the therapy groups. Although it was recognised that individual differences would occur between the therapists, attempts were made to provide some form of control on the methods which were used in the treatment of the two experimental groups.

(xii) Taken into account, to some extent, the placebo effect as discussed in the introduction, firstly by controlling the therapist effect between treatment groups, and secondly by comparing two experimental treatment groups and comparing these with a 'no treatment' control (Rosenthal and Frank, 1956).

On the basis of the above discussion, it would appear that treatment, whether by group therapy or remedial reading, as outlined in this study, is able to effect an improvement in reading attainment which is significantly greater than 'no treatment'. This finding does not support null Hypothesis 1 that those retarded readers in the therapy group and the remedial reading group will not show greater gains in reading achievement on the criterion test than those retarded readers in the Control group.

Table 1 Appendix B which is diagrammatically represented in Figure 1, indicates the individual variations of the subjects in the Experimental and Control groups with regard to their pre/post test difference scores in reading attainment. Whilst it shows the enormous variation in individual response, both to remedial reading and therapy approaches, it also illustrates the effect of 'no treatment'. Although three 'untreated' children in the control made considerable gains in reading attainment, on average

four months reading age per month of experimental period, almost half of the group showed a loss of reading attainment, on average three months reading age per month of experimental period. This is contrast to the remedial reading and therapy group children, in which none of the children showed a loss in reading attainment, and all, with the exception of two children in the remedial reading group, showed a closing of the gap between chronological and reading age.

Whilst in general these results demonstrate the need for further research into the factors which are involved in bringing about the individual variations of response, they also draw attention to the problems of setting up a 'no treatment' control group. The fact that three 'untreated' children recovered spontaneously suggests that these children may in fact have received considerable extra attention at school or at home.

In the main however, the loss of reading attainment by nine of the 'untreated' subjects would show the need for children with reading difficulties to have assistance, and suggests that without treatment the prognosis for these children is not good.

This study offered no solution to the problem of why there was no significant difference in improvement in reading attainment between the retarded readers who were treated by a remedial reading approach, as compared with those treated by a group therapy approach.

In this study placebo effects were controlled in that both the remedial reading and the therapy group children saw the therapists for the same amount of time and with the same frequency, although the methods of treatment were varied. Both groups of

children improved, and there was no significant difference in the degree of improvement. It may therefore be postulated that placebo-effect was an important factor in bringing about that change, especially when these Experimental groups are compared with the Control group, who were not exposed to this effect. There was no significant improvement in reading attainment in the Control group children. Related to this issue are the findings of Rosenthal and Jacobson (1968), which indicate that a child tends to respond to the expectations of its teachers. It may be speculated that the children in the treatment groups may have, to some extent, viewed the therapists in the same way that they would view their teachers, and therefore may have been responding to the expectations of the therapists.

The fact that neither of the therapists was a trained remedial reading teacher, has also to be taken into account when trying to explain this finding. It is possible that had the therapists been specialists in this field, the results might have been different.

Finally, mention should be made of the procedure which was used for the therapeutic type approach with the retarded readers. This study adopted a broad approach to therapeutic procedures and attempted to mobilise the help of parents and teachers. Additionally, these procedures were directed towards a wide number of areas in the child's life. In this respect, it would appear to be different to other studies in this field. It is possible, therefore, that had a different approach to therapeutic procedures been used, the results once again may have taken a different direction.

4.1.2 Personality and Adjustment

As has been demonstrated in Tables 32 to 41, the retarded readers in the remedial reading and therapy groups did not show a significant improvement in personality adjustment measures when compared to the Control group, nor was there any significant difference on these measures between the remedial reading and therapy groups. These findings would therefore appear to support null Hypotheses 3 and 4.

This finding is in accordance with the findings of Carroll (1972), Collins (1961), Dunham (1960) and Valentine (1951). It is in conflict with the findings of Lawrence (1971 and 1972) whose results appeared to produce some positive personality change.

In considering these findings, that neither of the treatments were able to effect any measurable personality and adjustment change, the following points should be taken into consideration.

(i) It is possible that the instruments used in an attempt to detect these changes were insufficiently sensitive. Current techniques of measuring adjustment and personality are frequently criticized as being low in validity (Vernon, 1964), and the comparison of the relationships among measures of adjustment shows low correlations (Azam, 1967; Chazan, 1970).

(ii) Vernon (1957) has found that backwardness in reading is not associated with any particular type of personality defect or emotional disturbance. The Isle of Wight study (Rutter, Tizard and Whitmore, 1970) found that severe reading retardation is very frequently associated with antisocial behaviour. Malmquist (1958) found self-confidence, persistence and ability to concentrate impaired in children with reading disabilities. It

is possible therefore, that the children in this study as a group, would not have shown personality defect or emotional disturbance on the measures used, but would have had behaviour which presented as a problem in the classroom, behaviour such as poor concentration, restlessness, mischief-making, and poor relationships with the other children. Unfortunately no measures of behaviour were used in this study and it was therefore not possible to gauge the effects of treatment on behaviour.

(iii) An examination of group mean differences on the measures used, may not reveal important changes which might have taken place. It is possible that there was a great deal of variation in the individual responses to both remedial reading and therapy approaches, notwithstanding the fact that no change was shown in the overall results.

In conclusion therefore, it is suggested that personality and adjustment changes did occur in the children who took part in this study. The fact that it was not possible to detect this change may be explained by the following: that the instruments may not have been sensitive enough to detect these changes; that the changes which occurred were not in the areas measured by the tests; that the methods used to analyse the data precluded the possibility of these changes being detected.

4.2 The Effects of the Therapists

4.2.1 Reading Attainment

As Table 42 has shown, there was a significant difference in the improvement of reading attainment of those children in the female therapist's group when compared with the male therapist's group. The female therapist's group showed significantly greater gains in

reading achievement than the male therapist's group.

This finding is in line with many authors (e.g. Meltzoff and Kornreich, 1970; Pumfrey and Elliott, 1970; Truax and Carkhuff, 1967) who have stressed that the therapist variable should be controlled and investigated when attempting outcome studies of different methods of treatment. The studies of Aspy (1965), Aspy and Hadlock (1966) and Lawrence (1972) may be seen as indicating similar findings, in that gains in children's reading achievement levels appeared to be related to teachers with particular personality characteristics.

This study offered no solution to the problem of why there was a significant difference in improvement in reading attainment between the therapists' groups, but suggestions are offered.

Although certain therapist variables were controlled; for example, length and type of experience, social, ethnic and cultural background; the personality characteristics of the therapists were not investigated. Had this been done, it would not necessarily have shed any light on the above-mentioned problem. Research findings (Meltzoff and Kornreich, 1970) have indicated the complex relationship which appears to exist in the interaction of subject and therapist variables with regard to therapeutic outcome.

The fact that the therapists' treatment groups were not matched at the different age levels, may have been an important factor in trying to explain these results. The reasons for not being able to compare the effects which the therapists had on the children in the different treatment groups, has been fully discussed in the preceding sections of this report, both in the section which dealt with the method of assigning the children to the particular

therapist's remedial reading or therapy group, and in the section dealing with the analysis of data pertaining to these groups. Briefly, the male therapist's therapy group was younger, with a lower RA, than the female therapist's therapy group. The reverse occurred with the therapists' remedial reading groups.

It could therefore be argued that the efficacy of a particular approach in improving reading attainment, might have been related to either the chronological or reading age of the children in these groups. Had the treatment groups assigned to the male therapist been assigned to the female therapist and vice versa, the results may have been different. This argument does not necessarily discount the effect of the therapist, for it could be argued that a particular therapist may have been more effective in dealing with children of a particular age group, using a particular approach. Had that same therapist, dealing with the same age group, attempted to use a different approach, the results using this approach, may not necessarily have been as effective.

Another factor which must be considered when trying to explain the difference in improvement between the therapists' groups is the difference in sex between the therapists. In both therapist groups, the majority of children were boys. Studies covered in the introduction by Blanchard (1928), Peterson, Becker, Hellman, Shoemaker and Quay (1968) and Hall (1966) have pointed towards a relationship between poor father-child relationship in the case of boys, and the effect that this has for scholastic achievement. Blanchard states that the negative attitude which the child may have towards the parents will influence the attitude of the child towards the teacher. Further investigation of the boys in these groups may have revealed poor father/child relationships, thereby

giving some ground for suggesting that this factor might have affected these children's attitude towards a male therapist rather than a female therapist, with a resultant effect on treatment outcome.

Figure 2 illustrated the fact that none of the children in either of these groups showed what Bergin (1967) calls the 'deterioration effect'. All the children showed improvement in reading attainment, although there were two of the children who did not close their CA/RA gap. Figure 2 also demonstrates the enormous variation of the individual responses to both the male and the female therapists. This once again points to the problem which is encountered when group mean differences on measures are used, for these may not reveal important changes which might have taken place.

4.2.2 Personality and Adjustment

As discussed in the results, there was no significant difference between the male therapist and female therapist groups with regard to change in personality and adjustment, as reflected on criterion measures.

This finding with regard to the therapists' groups, conforms with the findings previously reported in this study with regard to the Experimental and Control groups.

In trying to explain these results, the suggestions which were put forward previously in discussing the results of the personality and adjustment measures of the Experimental and Control groups, would all apply in the discussion of these results. It therefore appears to be superfluous to recount them.

Briefly, it was suggested that personality and adjustment

changes may well have taken place in the children of these groups, but because of the inadequacies of the measures used and by examination of group mean differences on the measures used, it might not have been possible to detect these changes.

4.3 Conclusion

In conclusion, it is suggested that this investigation has demonstrated that

- (i) A remedial reading and a group therapy treatment programme as outlined in this study and administered over four months, was able to effect significant gains in reading attainment with retarded readers, when compared with the results of a group of children who were 'not treated'.
- (ii) There was no significant difference between the remedial reading and group therapy treatment programmes with regard to the effect that these programmes had on the gains in reading attainment with retarded readers.
- (iii) There was a significant difference between the gains in reading attainment of the retarded readers treated (irrespective of the treatment programme used) by the female therapist, when compared with the gains in reading attainment of the retarded readers treated (irrespective of the treatment programme used) by the male therapist.

The present study shows therefore, that both the remedial reading and group therapy approaches were equally effective in improving the reading attainment of retarded readers over a short period of time. It was not able to offer a solution to the problem of how exactly this efficacy operates. The findings do show however, that the therapist plays an important role in the outcome of treatment.

End.

The fact that this study was not able to demonstrate that personality and adjustment changes had taken place in these children, must be viewed with caution. The changes in these areas may have taken place, but because of the inadequacies of the measures used and by the examination of group mean differences on the measures used, it might not have been possible to detect such changes.

4.4 Future Research

This study has demonstrated the short-term effects of a remedial reading and a group therapy approach to the treatment of retarded readers. It is necessary to know what the long-term effects of the relative programmes will be. It is therefore intended to carry out a follow-up study of these children after five years to see if there is a difference in the long-term gains between the children in the remedial reading, therapy and control groups. It was hoped that by trying to effect a change in such areas as the attitudes of the child, as well as the parents and teachers of those children in the therapy groups, this would have some effect on the long-term gains of these children.

It is also proposed that further statistical analysis of the existing data might elucidate some of the findings a little further. For example, it might be possible to group the children on the basis of IQ and compare this with rate of improvement, compare family composition and rate of improvement, or chronological age and rate of improvement.

Further research is needed in trying to unravel the factors which are involved in the effect which the therapist/teacher has in the treatment of retarded readers.

Finally, the fact that this study was not able to demonstrate personality or adjustment changes in these children, points to the great need in this type of research for the development of measurements which will be more sensitive and more able to detect the subtle changes which may occur in the areas of the child's life towards which this investigation was aimed.

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A P P E N D I C E S

APPENDIX ASOCIAL CLASS

Rate according to father's profession. If retired, rate according to what employment used to be. If widowed or divorced, rate according to what father used to do.

- CLASS I Traditional aristocracy, millionaires, cabinet ministers, chancellors and principals of universities, managing directors or chairmen of Boards of nation-wide or international companies.
- CLASS II Professionals, salaried executives, owners of large firms, operators of moderate sized enterprises, students of universities and colleges, prosperous farmers and landowners.
- CLASS III Small businessmen, small farmers, clerical workers, white-collar workers, semi-professionals.
- CLASS IV Skilled workers, qualified tradesmen, apprentices.
- CLASS V Semi-skilled workers.
- CLASS VI Unskilled workers, permanently unemployed, poor Whites.

APPENDIX A

Aides used for Remedial Reading Group

Actions - picture and work making cards.
 Consonant vowel blend matching cards.
 Object Lotto: Edwards Corp., 1970.
 Phonetic word drill cards.
 Picture phonic cards.
 Positional word and picture matching cards.
 Sort and sound digraph cards.
 Sort and sound word making cards.
 Shape matching and sorting strip books.
 The Syllable game.
 Vocabulary pictures and words.
 Word blends - suffixed, prefixes.
 Use was also made of some of the cards from the Stott, D.H.
 Programmed Reading Kit. Glasgow: Holmes, 1962.

Books Displayed in Reading Corner

A Dog for Jenny. Huddersfield: Schofield and Sims Ltd., 1967.
 Basic Vocabulary Series - Folk Stories, Animal Stories, 'Why' Stories. Illinois: Garrard Press, 1952.
 Beginner Book Series. London: Collins, 1961.
 Breakthrough Books - Yellow, Red and Blue Series. London: Longman, 1972.
 Data on Cowboys. Huddersfield: Schofield and Sims Ltd., 1967.
 Discovery Readers 1 - 9. London: Harrap, 1956.
 Dragon Books, Series A - D. Leeds: Arnold and Son.
 Griffin Readers. Leeds: Arnold and Son.

Mike and Mandy Readers, Books 1 - 11. London: Thomas Nelson and Sons.

Our Animal Story Books. New York: Heath and Company.

Piccolo Picture Books. London: Pan Books, 1970.

Robin Books. Edinburgh: Banks and Company.

Sea Hawk Books. Leeds: Arnold and Son.

Time for Reading Series 1 - 12. London: Ginn and Company.

APPENDIX AA Procedure used with the Therapy Groups Illustrating
the Use of Behavioural TechniqueGroup Relearning Experience with the Central Focus on
the Use of Relaxation and DesensitizationProcedure

This procedure was undertaken over 10 sessions ranging from 20 - 30 minutes. It was undertaken after the children had been attending group meetings for about 4 weeks, so that a good relationship had been established between group members and group members and their therapists.

In discussing their reading and school problems, it became apparent that there were a number of situations involving reading, which caused the children to become anxious. A typical way of the child explaining this was to say that his 'tummy felt in a knot'. Further discussions revealed that although there were individual differences in the type of reading situations which were anxiety provoking, there were, nevertheless, a sufficient number of situations which appeared to be common to all group members. The compilation of a hierarchy of anxiety provoking situations appeared, therefore, to be warranted.

It was then suggested to the group that they should all help to write a story about reading in school, learn to relax and then listen to the story that was written. (The term 'desensitization hierarchy' was not used).

The hierarchy which was constructed appeared to be common for all in the group. It is presented from the least anxiety provoking to the most anxiety provoking situations.

To receive a colourful, interesting book as a present.

To see classmates reading at the other end of the classroom, looking happy.

To think about reading in the next lesson.

A reading lesson, and one has to take one's book out of the desk.

The teacher says that it is your turn to read.

To have to read out aloud.

To come across a word in the story that one does not know.

To have a new teacher and whilst reading aloud, one loses one's place and the teacher passes a comment.

To have a new teacher and whilst reading aloud, one loses one's place and the teacher looks angry.

In the first session, the therapist taught the children a progressive relaxation technique. In the second session, the children were again taught relaxation techniques. The presentation of the hierarchy items was introduced in the third session. The therapist gradually presented all of the 10 items in the hierarchy. Each new item in the hierarchy was only presented when all the group members reported that the previous item was no longer disturbing to them.

APPENDIX ADiscovery MethodA Group Project Illustrating How
Multiple Goals Were Achieved

During a discussion by the group members of their special interests, one member spoke about his interest in history and Christopher Columbus in particular. He spoke of the bravery of Columbus in setting out to sail across the ocean in a boat as small as the Santa Maria.

The therapist suggested to the group that they should mark out the size of the boat, defining its limits with a chalk outline on the floor. This would make it easier for them to fully realise the size of the boat. The suggestion was enthusiastically supported, and the group member who had started the discussion was elected to supervise the operation.

The group then decided to gather whatever information they could about the ship, Columbus and his voyage, and to enact the trip. The ship was made a little more realistic by the addition of a table as a deck and a broomstick for the mast. Finally, before the trip was started, the children chose certain roles such as Columbus, the cook, deckhands and a navigator.

This project, which had developed almost spontaneously from group discussion, was used to fulfil a number of goals, viz:

It contributed to the self-esteem of the member whose particular interest was Columbus. It showed the child that the therapist had confidence in his ability to be a group leader, and that he was able to help the other members.

Group solving behaviour was introduced, with each child

encouraged to contribute in some measure. The focus was on what they might do to solve a problem, and discussion on the various solutions.

The value of reading was emphasized. The group were shown that by being able to read, they were able to discover and obtain information.

The project fulfilled a cathartic function as well, because whilst engaged in this activity, many feelings, beliefs, expectations and wishes were voiced by members. Additionally, opportunities arose which were used to give members understanding of their own behaviour and that of others.

APPENDIX A

The game 'Word Lotto', which was used with the younger group of remedial reading children when they had completed Book 1 of the series 'Sounds travel too'.

Aim:

Overlearning of recently acquired sight vocabulary.

Equipment:

Five cards, each with a random selection of the following words:
I, the, my, egg, he, she, to, ask, go, no, by, so, do, you, off,
or, me, we, are, be, her, too, all.

Twenty-three cards, on which the above words were written.

Method:

Each of the 5 children in the group were given a card. The therapist called out a word drawn at random from the pool containing all the words on all the cards. As the child heard one of the words called, he covered the appropriate space with a counter. First to cover a card 'won'.

'Noun Cards' - a game taken from Stott's Programmed Reading (Stott, 1962).

Aim:

Overlearning of sight vocabulary (nouns) and acquisition of new sight vocabulary (nouns).

Equipment:

A number of cards. The cards depict different objects. Below the object appears the word which names the object. On the reverse of the card the name word is repeated.

Method:

The game is played by 2 players who sit facing each other across a table. Each player draws a specified number of cards (3?) from a common pool and arranges the cards so that he can see the inside of his own cards. All that he can see of his opponent's cards are the back or outside. The first child, designated as

the 'asking' child, says "Find my", and names one of the objects on his card. The 'seeking' child looks at the 3 cards arrayed before him and makes his choice. The picture on the inside tells him whether he is correct or not. Further cards may be drawn from the pool.

APPENDIX A

P.A. INVENTORY

FOR BOYS

The questions which follow are to help us find out what boys and girls think, and the things they wish for. There are no "right" or "wrong" answers. Each boy and girl will answer differently. Just try to put down what you really think, and really wish.

My Name is _____

Age _____ School _____

Grade in School _____

DATE _____

NUMBER ONE

Suppose that just by wishing you could change yourself into any sort of person. Which of these people would you wish to be? Write a "1" in front of your first choice, a "2" in front of your second choice, and a "3" in front of your third choice:

- | | | | |
|-----------|------------------|-----------|-------------------|
| (a) _____ | a housewife | (n) _____ | a fireman |
| (b) _____ | a teacher | (o) _____ | a poet |
| (c) _____ | a movie star | (p) _____ | a detective |
| (d) _____ | a typist | (q) _____ | a doctor |
| (e) _____ | a shopkeeper | (r) _____ | a nurse |
| (f) _____ | a cowboy | (s) _____ | an engineer |
| (g) _____ | a business man | (t) _____ | an actress |
| (h) _____ | a business woman | (u) _____ | a boxer |
| (i) _____ | a princess | (v) _____ | a king |
| (j) _____ | an inventor | (w) _____ | a singer on radio |
| (k) _____ | a policeman | (x) _____ | a lawyer |
| (l) _____ | a jet pilot | (y) _____ | a salesman |
| (m) _____ | an army officer | (z) _____ | an artist |

Is there any other sort of person you would very much like to be? If there is, write it here:

NUMBER TWO

Suppose you could have just three of the wishes below, which would you want to come true? Put a "1" in front of your biggest wish, a "2" in front of your second biggest wish, and a "3" in front of your third:

I would like

- | | |
|-----------|--|
| (a) _____ | to be stronger than I am now. |
| (b) _____ | to have the boys and girls like me better. |
| (c) _____ | to get along better with my father and mother. |
| (d) _____ | to be cleverer than I am now. |
| (e) _____ | to play games better. |
| (f) _____ | to have a different father and mother. |
| (g) _____ | to be a boy (if you are a girl). |
| (h) _____ | to be a girl (if you are a boy). |
| (i) _____ | to be bigger than I am now. |
| (j) _____ | to have more money to spend. |
| (k) _____ | to be grown up and get away from home. |
| (l) _____ | to have more friends. |
| (m) _____ | to be better looking. |
| (n) _____ | to have my father and mother love me more. |

NUMBER THREE

Suppose you were going away to live on a desert island, and could only take three people with you. Write here the names of the three people you would choose:

1. _____ 3. _____
 2. _____

NUMBER FOUR

Read the sentences below, and the questions that follow them. If the answer to a question is "yes", put a check mark (✓) on "yes". If the answer is "no", put a mark on "no". If the true answer is somewhere in between yes and no, put the mark where it will be most true. Study this sample until you know how to do it.

SAMPLE:

Harold can run faster than any boy in school.

Am I just like him?.....

Yes									No
Yes									No

Do I wish to be just like him?..

Do the sentences below the same way as you did the sample.

1. Peter is a big, strong boy who can beat any of the other boys in a fight.

Am I just like him?.....

Yes									No
Yes									No

Do I wish to be just like him?..

2. George likes to read. He has read all the books he can get about adventure, war and sport.

Am I just like him?.....

Yes									No
Yes									No

Do I wish to be just like him?..

3. Ed is the best sportsman in school.

Am I just like him?.....

Yes									No
Yes									No

Do I wish to be just like him?..

4. Sam gets very good marks in all his school work.

Am I just like him?.....

Yes									No
Yes									No

Do I wish to be just like him?..

5. Allan has make-believe friends and a make-believe world which is much nicer than the real world. He sits and dreams of all sorts of make-believe adventures with these make-believe friends.

Am I just like him?.....

Yes									No
Yes									No

Do I wish to be just like him?..

NUMBER FOUR (Continued)

17. Which of these sixteen boys would your mother like best? Write his name here

18. Which of these sixteen boys would your father like best? Write his name here

NUMBER FIVE

In the questions that follow, put a mark (✓) in front of the line that is the true answer, unless it tells you to do otherwise:

1. How well can you play ballgames?

- (a) _____ can't play ballgames at all.
- (b) _____ can play a little bit.
- (c) _____ can play pretty well.
- (d) _____ best player in my class.

2. How many friends would you like to have?

- (a) _____ none.
- (b) _____ one or two.
- (c) _____ a few good friends.
- (d) _____ many friends.
- (e) _____ hundreds of friends.

3. How strong are you?

- (a) _____ very weak.
- (b) _____ not very strong.
- (c) _____ strong.
- (d) _____ the strongest in my class.

4. When you are grown up, what sort of person do you want to be?

- (a) _____ I want to be a very great person and do great things that people will talk about.
- (b) _____ I want to be one of the leaders in whatever town I live in.
- (c) _____ I want to be a happy ordinary person, with a good job.
- (d) _____ I would rather not grow up.

NUMBER FIVE (Continued)

5. Do you like to play games with the other boys and girls?

- (a) _____ I don't, because I can't play games very well.
- (b) _____ They don't want me to play with them, because I
can't play games very well.
- (c) _____ I like to play games fairly well.
- (d) _____ I like it a great deal.
- (e) _____ I would rather play games than anything else I know.

6. (In this question put a "1" in front of your first choice, a "2" in front of your second choice, and a "3" in front of your third choice).

If you were going to the circus, would you rather go

- (a) _____ with your father?
- (b) _____ with your best friend?
- (c) _____ with a group of friends?
- (d) _____ with your mother?
- (e) _____ all alone?

7. Do you want to be a grown-up man or woman?

- (a) _____ I just can't wait to be grown up.
- (b) _____ I would like to be grown up.
- (c) _____ I don't want to be grown up. I would rather be just
as I am.
- (d) _____ I would like best of all to be a few years younger
than I am now.

8. How well do your father and mother like you?

- (a) _____ I am the one they like best of all.
- (b) _____ They like me second best.
- (c) _____ They like all my brothers and sisters better than
they like me.
- (d) _____ They like me well enough, but not better than my
brothers and sisters.

9. Which do you like best?

- (a) _____ to go off by yourself and play or read.
- (b) _____ to play with one or two others.
- (c) _____ to play with a whole crowd.

10. Do you like to have some one else tell you how to do things?

- (a) _____ I like it.
- (b) _____ I don't care.
- (c) _____ I would rather do things my own way.
- (d) _____ I hate to be told what to do.

NUMBER FIVE (Continued)

11. How do you feel when your brother or sister is praised for something they have done?
- (a) _____ I feel proud of them.
 - (b) _____ I wish I could do better than they have done.
 - (c) _____ I don't like to have them praised.
 - (d) _____ I hate to have them do better than I can do.
 - (e) _____ I don't care.
 - (f) _____ I don't have any brother or sister.
12. Are you good looking?
- (a) _____ I'm not at all good looking.
 - (b) _____ I'm not very good looking.
 - (c) _____ I'm as good looking as most boys and girls.
 - (d) _____ People say that I'm very good looking.
13. Do other children play mean tricks on you?
- (a) _____ never.
 - (b) _____ sometimes.
 - (c) _____ very often.
14. Do you have any good friends?
- (a) _____ none at all.
 - (b) _____ one or two.
 - (c) _____ a few good friends.
 - (d) _____ many friends.
 - (e) _____ hundreds of them.
15. Do you like to get into rough games, wrestling matches, football games and things like that?
- (a) _____ I like them very much..
 - (b) _____ I like them a little.
 - (c) _____ I don't like them.
 - (d) _____ I hate to have people push and pull me around.
16. Do people treat your brother (or sister) better than they treat you?
- (a) _____ never.
 - (b) _____ sometimes.
 - (c) _____ often.
 - (d) _____ almost always.
 - (e) _____ I haven't any brother or sister.
17. Do you wear good clothes to school?
- (a) _____ I don't have any nice clothes.
 - (b) _____ My clothes are nice enough.
 - (c) _____ I have very good clothes.

NUMBER FIVE (Continued)

18. What do your father and mother want you to do when you are grown up?
- (a) _____ They want me to be a very great person and do great things that people will talk about.
 - (b) _____ They want me to be one of the leaders in whatever town I live in.
 - (c) _____ They want me to be a happy, ordinary person with a good job.
 - (d) _____ They don't want me to grow up.
19. Do boys or girls like you best?
- (a) _____ The boys like me better than the girls do.
 - (b) _____ The girls like me better than the boys do.
 - (c) _____ I am popular with both boys and girls.
 - (d) _____ I am not popular with either boys or girls.
20. When do you think one has the most fun in life?
- (a) _____ When you are a young child.
 - (b) _____ When you are between 9 and 12 years old.
 - (c) _____ When you are between 12 and 25 years old.
 - (d) _____ After you are 25 years old.
21. Do you want people to like you?
- (a) _____ I just can't stand it, if people don't like me.
 - (b) _____ I always try very hard to make people like me.
 - (c) _____ I don't care very much, but I'm glad when people like me.
 - (d) _____ I don't care a bit whether people like me or not.

NUMBER SIX

Fill in enough of the squares below to show how many there are in your family. If you had one older brother and two younger sisters you would fill them out like the sample. Notice that you put the oldest person in the family first, then the next oldest, and so on. Don't forget to put yourself in. Cross out the extra squares:

SAMPLE

YOU FILL IN THIS ONE

Father
Mother
Brother
me
Sister
Sister
/
/
/
/
Your best girl friend
Your best boy friend

Your best girl friend
Your best boy friend

Now go back and put a "1" in front of the person you love most, a "2" in front of the person you like next best, a "3" in front of the person you like next best, and so on through the whole list. Sometimes it is very hard to decide which person you love best, but do the best you can, and be sure that you put a number in front of each person except yourself. Don't forget the last two, your best boy friend, and best girl friend. Put a number in front of them, too, that will tell how much you like them.

APPENDIX B

LIST OF SCHOOLS ATTENDED BY SUBJECTS
OF THERAPY, REMEDIAL READING AND
CONTROL GROUPS

	<u>Therapy</u> <u>Group</u>	<u>Remedial</u> <u>Reading</u> <u>Group</u>	<u>Control</u> <u>Group</u>
Aliwal Road Primary School		1	
Bergvliet Junior School	2	3	1
Camps Bay Primary School		1	
Diocesan College Preparatory School	1		
Fish Hoek Primary School	1	1	
Golden Grove Primary School		2	1
Grove Primary School			
John Graham Primary School		1	
Marist Brothers - St. Josephs	1	1	2
Micklefield Junior School	1		
Monterey Preparatory School	1		
Mowbray Primary School			1
Muizenberg Junior School	2		
Pinelands Primary School		3	
Pinelands North Primary School	1		
Plumstead Primary School			1
Rosebank Junior School	1	1	
Rondebosch Boys Primary School	1	1	1
South African College Junior School	3	2	2
St. Catherine's School	1		
Sweet Valley Primary School	1		
Wynberg Boys' Junior School	1	2	8
Wynberg Girls' Junior School	1	1	
	<u>19</u>	<u>20</u>	<u>20</u>

TOTAL: N = 59

APPENDIX BTable 1

THE PRE/POST TEST DIFFERENCE SCORES FOR THE
REMEDIAL READING, THERAPY AND CONTROL
GROUPS ON THE NEALE

<u>Remedial Reading Group</u>	<u>Therapy Group</u>	<u>Control Group</u>
<u>N = 20</u>	<u>N = 19</u>	<u>N = 20</u>
5	12	3
8	5	- 3
5	8	5
25	17	5
23	18	4
18	22	- 3
25	21	2
5	29	- 9
9	29	- 1
1	5	13
23	10	- 3
17	14	- 2
23	7	- 1
38	20	17
23	-	0
19	17	- 3
3	17	10
19	18	1
17	31	- 2
24	32	6
Mean	16,50	17,47
Standard Deviation	9,72	8,53
		6,18

APPENDIX B
Table 2

THE PRE/POST TEST DIFFERENCE SCORES FOR THE REMEDIAL
READING, THERAPY AND CONTROL GROUPS ON THE CPQ
- ANXIETY FACTOR

<u>Remedial Reading Group</u>		<u>Therapy Group</u>		<u>Control Group</u>	
<u>N = 20</u>		<u>N = 19</u>		<u>N = 20</u>	
	3		- 1		- 7
	8		- 13		- 11
	- 6		5		12
	1		9		22
	12		9		- 22
	- 4		9		5
	13		- 9		- 1
	12		17		3
	6		- 8		- 4
	- 11		1		18
	- 2		11		10
	- 8		0		1
	- 24		- 1		- 2
	- 5		- 29		4
	- 11		3		- 25
	- 5		16		24
	19		- 15		3
	31		- 5		6
	- 18		- 8		- 28
	- 13		-		8
Mean	- ,10		- ,47		,80
Standard Deviation	13,32		11,57		14,25

APPENDIX BTable 3

THE PRE/POST TEST DIFFERENCE SCORES FOR THE REMEDIAL
READING, THERAPY AND CONTROL GROUP ON THE
CPQ - EXTRAVERSION FACTOR

<u>Remedial Reading Group</u>	<u>Therapy Group</u>	<u>Control Group</u>
<u>N = 20</u>	<u>N = 19</u>	<u>N = 20</u>
0	,06	- ,66
,33	- ,99	,66
- ,33	- 2,31	- 2,31
,64	- 1,65	- 1,65
- 1,98	- 2,64	,66
1,31	1,32	1,19
- ,55	1,32	2,64
- 2,64	1,98	- 2,85
,99	,99	- 1,23
0	0	- ,33
- ,99	- ,99	1,32
0	,66	- ,33
1,98	1,32	,33
0	,03	0
,33	,33	1,32
- 2,31	- ,33	- 1,65
1,65	,64	,66
,66	0	,33
1,65	,33	- ,04
- 1,32	-	- 2,98
Mean	- ,03	- ,25
Standard Deviation	1,31	1,25

APPENDIX BTable 4

THE PRE/POST TEST DIFFERENCE SCORES FOR THE REMEDIAL
READING, THERAPY AND CONTROL GROUP ON THE
JEPI - E SCALE

<u>Remedial Reading Group</u>		<u>Therapy Group</u>		<u>Control Group</u>	
<u>N = 20</u>		<u>N = 19</u>		<u>N = 20</u>	
	- 2		- 7		- 1
	0		- 5		1
	- 2		4		1
	1		6		2
	- 2		- 8		0
	5		- 6		8
	2		4		1
	5		2		2
	0		- 5		0
	2		7		- 1
	- 1		0		- 1
	- 1		- 3		1
	0		- 2		4
	6		- 2		2
	- 7		8		1
	- 5		2		- 3
	- 2		- 4		- 8
	- 1		1		- 2
	4		-11		- 4
	- 2		-		- 2
Mean	,00		- 1,00		,05
Standard Deviation	3,31		5,39		3,22

APPENDIX BTable 5

THE PRE/POST TEST DIFFERENCE SCORES FOR THE REMEDIAL
READING, THERAPY AND CONTROL GROUP ON THE
JEPI - N SCALE

	<u>Remedial Reading Group</u>	<u>Therapy Group</u>	<u>Control Group</u>
	<u>N = 20</u>	<u>N = 19</u>	<u>N = 20</u>
	- 4	10	- 8
	2	- 3	8
	4	0	- 5
	- 6	- 7	3
	- 4	- 1	-10
	10	- 10	- 3
	4	7	- 2
	- 1	- 1	0
	- 2	2	- 5
	3	- 11	1
	- 5	2	0
	- 4	- 2	- 4
	- 2	0	- 5
	5	- 11	- 1
	5	0	- 3
	- 5	- 16	- 1
	2	- 2	- 4
	- 5	- 5	- 1
	-10	- 3	- 6
	- 3	-	- 1
Mean	- ,8	- 2,6	- 2,35
Standard Deviation	4,98	6,33	3,95

APPENDIX BTable 6

THE PRE/POST TEST DIFFERENCE SCORES FOR THE REMEDIAL
READING, THERAPY AND CONTROL GROUP ON THE
JEPI - I SCALE

<u>Remedial Reading Group</u>		<u>Therapy Group</u>		<u>Control Group</u>	
<u>N = 20</u>		<u>N = 19</u>		<u>N = 20</u>	
- 2		- 2		- 3	
8		- 2		7	
- 1		- 2		- 4	
- 3		3		- 2	
- 3		3		- 1	
- 1		4		- 3	
- 1		- 4		4	
1		- 1		0	
- 3		5		3	
0		- 6		3	
0		- 3		0	
1		1		0	
1		- 1		0	
0		1		- 4	
0		3		4	
0		0		3	
- 3		- 1		- 7	
0		- 1		0	
3		4		0	
2		-		0	
Mean	- ,05	,05		,00	
Standard Deviation	2,54	3,00		3,34	

APPENDIX B
Table 7

THE PRE/POST TEST DIFFERENCE SCORES FOR THE REMEDIAL
READING, THERAPY AND CONTROL GROUP ON THE
ROGERS - DAYDREAMING

<u>Remedial Reading Group</u>		<u>Therapy Group</u>		<u>Control Group</u>	
<u>N = 20</u>		<u>N = 19</u>		<u>N = 20</u>	
	0		2		1
	4		2		4
	- 2		- 2		2
	- 2		- 6		2
	0		3		2
	- 3		- 2		1
	- 6		0		1
	- 7		2		1
	4		4		6
	- 2		- 5		2
	0		- 6		- 4
	0		- 6		- 3
	- 4		0		3
	- 2		2		- 1
	- 3		- 2		- 3
	- 7		6		- 4
	4		- 4		0
	- 2		- 2		9
	0		- 2		0
	- 3		-		- 2
Mean	- 1,55		- ,84		,85
Standard Deviation	3,22		3,59		3,26

APPENDIX B
Table 8

THE PRE/POST TEST DIFFERENCE SCORES FOR THE REMEDIAL
READING, THERAPY AND CONTROL GROUP ON THE
ROGERS - FAMILY RELATIONSHIPS

	<u>Remedial Reading Group</u>	<u>Therapy Group</u>	<u>Control Group</u>
	<u>N = 20</u>	<u>N = 19</u>	<u>N = 20</u>
	3	10	6
	- 2	- 7	2
	5	5	4
	11	- 2	4
	7	- 2	3
	- 7	- 4	- 19
	1	- 9	4
	2	- 2	- 11
	- 2	- 2	2
	7	- 1	- 4
	- 3	- 1	2
	- 2	2	1
	- 7	4	4
	1	- 2	4
	- 1	0	- 5
	- 3	4	0
	- 1	- 4	- 5
	- 7	- 4	- 4
	- 4	- 4	0
	5	-	1
Mean	,15	- 1,00	- ,55
Standard Deviation	5,02	4,46	6,06

APPENDIX B
Table 9

THE PRE/POST TEST DIFFERENCE SCORES FOR THE REMEDIAL
READING, THERAPY AND CONTROL GROUP ON THE
ROGERS - PERSONAL INFERIORITY

	<u>Remedial Reading Group</u>	<u>Therapy Group</u>	<u>Control Group</u>
	<u>N = 20</u>	<u>N = 19</u>	<u>N = 20</u>
	7	9	3
	11	- 2	- 5
	5	- 7	- 8
	2	- 3	4
	- 11	- 7	6
	9	- 3	- 2
	- 2	- 1	- 5
	- 7	1	- 7
	- 3	- 1	- 4
	- 7	0	12
	6	4	3
	3	- 8	- 4
	8	2	2
	4	- 1	2
	- 5	- 4	2
	- 9	- 5	10
	- 8	0	- 2
	0	3	3
	- 5	- 5	9
	2	-	3
Mean	,00	- 1,47	1,10
Standard Deviation	6,63	4,23	5,63

APPENDIX B
Table 10

THE PRE/POST TEST DIFFERENCE SCORES FOR THE REMEDIAL
READING, THERAPY AND CONTROL GROUPS ON THE ROGERS
- SOCIAL INFERIORITY

<u>Remedial Reading Group</u>	<u>Therapy Group</u>	<u>Control Group</u>
<u>N = 20</u>	<u>N = 19</u>	<u>N = 20</u>
13	9	- 2
5	- 2	- 7
1	3	- 12
- 1	3	- 5
- 13	18	2
- 1	- 6	11
5	- 12	- 1
- 19	- 4	- 1
- 3	- 4	7
13	- 4	- 1
- 1	- 1	- 10
1	- 2	- 3
- 2	- 4	6
0	3	- 1
- 1	-	0
6	- 4	- 3
- 2	6	0
- 9	3	- 2
4	- 19	0
- 12	- 4	0
Mean	- 1,80	- 1,10
Standard Deviation	7,96	5,30

APPENDIX B
Table 11

THE PRE/POST TEST DIFFERENCE SCORES FOR THE REMEDIAL
READING, THERAPY AND CONTROL GROUP ON THE
ROGERS - TOTAL

<u>Remedial Reading Group</u>		<u>Therapy Group</u>	<u>Control Group</u>
<u>N = 20</u>		<u>N = 19</u>	<u>N = 20</u>
23		- 30	6
18		- 9	- 6
9		- 1	-14
- 1		- 8	5
-17		12	13
-15		- 9	-11
- 4		- 22	- 1
-32		5	-18
6		- 3	11
8		- 10	5
2		- 4	- 9
- 2		- 14	- 9
- 5		5	15
2		3	4
0		- 10	- 6
-13		- 5	3
- 8		- 22	- 7
-19		- 15	6
- 5		11	9
- 8		-	2
Mean	- 3.05	-6,63	- ,10
Standard Deviation	12,82	11,19	9,38

APPENDIX B
Table 12

THE PRE/POST TEST DIFFERENCE SCORES FOR THE
MALE THERAPIST AND FEMALE THERAPIST GROUPS
ON THE NEALE

<u>Male Therapist</u> <u>Group</u>	<u>Female Therapist</u> <u>Group</u>
<u>N = 19</u>	<u>N = 20</u>
18	5
25	8
5	5
9	25
1	23
19	23
3	17
19	23
17	38
24	23
12	22
5	21
8	29
17	29
18	5
10	17
14	17
7	18
20	31
	32

APPENDIX BTable 13

THE PRE/POST TEST DIFFERENCE SCORES FOR THE
MALE THERAPIST AND FEMALE THERAPIST GROUPS
ON THE CPQ - ANXIETY FACTOR

<u>Male Therapist</u> <u>Group</u> <u>N = 19</u>	<u>Female Therapist</u> <u>Group</u> <u>N = 20</u>
- ,4	,3
1,3	,8
1,2	- ,6
,6	,1
- 1,1	1,2
- ,5	- ,2
1,9	- ,8
3,1	- 2,4
- 1,8	- ,5
- 1,3	- 1,1
- ,1	,9
- 1,3	- ,9
,5	1,7
,9	- ,8
,9	,1
0	,3
- 1,0	1,6
- 2,9	- 1,5
,1	- ,5
	- ,8

APPENDIX BTable 14

THE PRE/POST TEST DIFFERENCE SCORES FOR THE
MALE THERAPIST AND FEMALE THERAPIST GROUPS
ON THE CPQ - EXTRAVERSION FACTOR

<u>Male Therapist</u> <u>Group</u>	<u>Female Therapist</u> <u>Group</u>
<u>N = 19</u>	<u>N = 20</u>
1,31	,33
- ,55	0
- 2,64	- ,33
,99	,64
0	- 1,98
- 2,31	- ,99
1,65	0
,66	1,98
1,65	0
- 1,32	,33
,06	1,32
- ,99	1,32
- 2,31	1,98
- 1,65	,99
- 2,64	0
- ,99	,33
,66	,33
1,32	- ,33
,03	,64
	0

APPENDIX BTable 15

THE PRE/POST TEST DIFFERENCE SCORES FOR THE
MALE THERAPIST AND FEMALE THERAPIST GROUPS
ON THE JEPI - E SCALE

<u>Male Therapist</u> <u>Group</u>	<u>Female Therapist</u> <u>Group</u>
<u>N = 19</u>	<u>N = 20</u>
5	- 2
2	0
5	- 2
0	1
2	- 2
- 5	- 1
- 2	- 1
- 1	0
4	6
- 2	- 7
- 7	- 6
- 5	4
4	2
6	- 5
- 8	7
0	8
- 3	- 11
- 2	2
- 2	- 4
	1

APPENDIX B
Table 16.

THE PRE/POST TEST DIFFERENCE SCORES FOR THE
MALE THERAPIST AND FEMALE THERAPIST GROUPS
ON THE JEPI - N SCALE

<u>Male Therapist</u> <u>Group</u>	<u>Female Therapist</u> <u>Group</u>
<u>N = 19</u>	<u>N = 20</u>
- 4	10
2	4
4	- 1
- 6	- 2
- 4	3
- 10	- 5
- 5	- 4
2	- 2
- 5	5
- 3	5
10	- 10
- 3	7
0	- 1
- 7	2
- 1	- 1
2	0
- 2	- 16
0	- 2
- 11	- 5
	- 3

APPENDIX BTable 17.

THE PRE/POST TEST DIFFERENCE SCORES FOR THE
MALE THERAPIST AND FEMALE THERAPIST GROUPS.
ON THE ROGERS - TOTAL

Male Therapist
Group

N = 19

- 15

- 4

- 32

6

8

- 13

- 8

- 19

- 5

- 8

- 30

- 9

- 1

- 8

12

- 4

- 14

3

5

Female Therapist
Group

N = 20

23

18

9

- 1

- 17

2

2

- 5

- 2

0

- 9

- 22

5

- 3

- 10

- 10

11

- 5

- 22

- 15

APPENDIX CCONFIDENTIAL REPORT ON N.M. BORN12TH AUGUST 1961Referral Problem

Poor scholastic achievement related to a reading and spelling difficulty.

Personal History

Obtained from mother on the 20th July 1972.

Neil is the youngest child. He has two older brothers aged 16 and 14 years. Both these children have also had problems with reading.

Father is aged 42 and is a representative with his own business. Standard 10 education standard.

Mother is 35, passed Standard 8, and works full-time helping father with his business. She also experienced problems with reading.

They have their own house. Neil has his own room and there is a paternal grandmother who stays with them.

Developmental History

Pregnancy and labour were normal. Breast-fed for six weeks and then bottle-fed. Milestones were at the expected times. Usual childhood illnesses. The only separation occurred when he fractured his arm and was hospitalised for one day. There were no problems with toilet training. No sleep disturbances. No 'nervous' habits. No self manipulations. The only factor which needs emphasis is that the mother feels that Neil was slow to speak distinctly. He used 'baby talk' and only started speaking properly at about 3 years. He was a very 'good' baby. Mother

has worked from the time that Neil was 6 months, and when he was small he was left in the care of one Nanny up until the family came to Cape Town this year. Vision and hearing have been checked and are normal. He is right handed and pre-pubertal. Mother has answered and explained any questions that have related to sex.

School Career

Neil attended nursery school. He settled down well and joined in group activities.

Sub A and B at primary school. He started on the I.T.A. reading systems and appeared to be coping. When the transition occurred in Standard 1, he 'collapsed'. At the end of Standard 1 he failed in English and Afrikaans. In Standard 2 his reading and spelling were very poor and the headmaster of the school sent him for extra lessons. Mother feels that his self-confidence has been undermined and the extra lessons did not help as much as they had hoped that they would.

At the beginning of this year the family moved to Cape Town, and the teacher of his present class suggested that he be seen at the Child Guidance Clinic.

Child's Interpersonal Relationships

Child/Sibs: Mother reports that they fight like 'cat and dog'. Neil is inclined to be passive and he lets his brothers bully him.

Child/Father: Neil gets on quite well with his father.

Child/Mother: Mother spoke of Neil being her favourite. She feels nearer to him than to the others because he is concerned about other people's feelings.

Child/Peers: Mother feels that he has a few good friends.

Child/Grandmother: Fond of her, but she does not have much to do with Neil as she spends a lot of time in her room.

Parents' Opinion of Developmental Level

Mother feels that Neil is quite a bright child. She would like him to matriculate and then go on to university.

Home Discipline

Both parents discipline. If the child is naughty, does not do what he is told, he is given a hiding.

History of Problem

With the transition from I.T.A. reading approach to the T.O., Neil had difficulty. He started becoming anxious about his reading. Tried to avoid reading, would burst into tears if asked to read out aloud in class. Had difficulty with his spelling, was spelling using the I.T.A. symbols.

Last year he had remedial reading lessons for 6 months. Mother has tried to help but does not have much time and finds that she 'loses patience'.

Interview with Neil - 24th July 1972

Neil presented as an alert child, anxious to please. He is an attractive child of medium build. Not hyperactive, but very tense. He volunteered the information that he likes school a 'lot', but does not like having to stand up in class to read because he cannot read. He likes reading. He is inclined to speak very quickly and enunciation is not always clear.

He spoke of his family and in trying to judge the quality of the father/son relationship, enquiries were made about the outings that the family have together. It was apparent that father is

very busy trying to establish a new business in Cape Town, and is kept involved and does not have much time free to spend with the children.

TESTS GIVEN AND RESULTS

Neale Analysis of Reading Ability

Speed	10 years	4 months
Accuracy	7 years	8 months
Comprehension	7 years	6 months

Average reading age 8 years 6 months. This is retarded by 2 years and 5 months. The standard deviation on this test is 12 months - this would still give him a score of 1 year 5 months below what is expected.

He read quite quickly and was inclined to mumble when confronted with a word that he could not read. He guessed at unknown words, he ignored punctuation. He knew his sounds and was able to sound out letter combinations, but was unable to synthesize. There was no evidence of reversals.

New South African Group Test

Non-verbal I.Q.	120
Verbal I.Q.	96
Full scale I.Q.	109

Sub Scales

Non-verbal

Number series	17
Figure analogies	16
Pattern completion	15

Verbal

Classification of pairs of words	6
Verbal reasoning	11
Analogies of words	8

This test was used as a screening device. A group test was administered because of time limitations. A group test of this nature does, however, penalise the child who has limitations of reading. I feel, therefore, that the non-verbal I.Q. score represents a more accurate picture of the child's potential than the verbal I.Q. score, which relies heavily on reading. The verbal raw scores of 6 and 8 were gained on subtests which require that the child read words out of context. In verbal reasoning, the child is able to use contextual clues when reading the questions.

Rogers Test of Personality Adjustment

		<u>Score</u>	<u>Mean</u>	<u>Rating</u>
Scores:	Personal inferiority	16	(14.3)	High
	Social inferiority	15	(13.2)	High
	Family maladjustment	20	(8.6)	High
	Day dreaming	4	(3.6)	High
		<u>55</u>	<u>(40.2)</u>	<u>High</u>

On this test Neil shows evidence of a great deal of maladjustment. His greatest difficulty is within the family situation. Two of his three wishes are for better relationships with his parents. To get along better with them and to have them love him more than they do. He is only loved 'second best' by them. He lacks the very abilities that would have him favourably evaluated by the parents. His mother would like him to be clever; he is not, he is 'dumb'. His father would like him to be a good sportsman and although he can play pretty well, he wishes that he could play better. He wishes that he always did what his parents told him to do, but he does not. He seems more attached to father than to mother and shows feelings of attachment to his brother as well.

He wishes that he did not fight with them all the time. There is evidence of parental pressure in that his parents would want him to grow up and be a very great person and do great things, but what he wants is to be a happy, ordinary person with a good job.

He also feels inadequate personally. He does not cover this up by bragging; he is self-deprecating; he admits that he does nothing well. He feels that he is lacking in strength, brains and good looks. There is a large difference between his ideal and his self. He would like to be able to read everything and can't; would like to get good marks at school and does not.

He also has difficulties in social adjustment. He feels that he is not popular with either boys or girls, but would like to be.

He indulges in a great deal of daydreaming, but this does not tie up with a desire to be infantile.

Junior Eysenck Personality Inventory

Scores:	<u>Score</u>	<u>Mean</u>	
Extraversion	18	(17.7)	
Neuroticism	22	(11)	More than 2 standard deviations above mean.
Lie	0	(4.8)	Almost 2 standard deviations below mean.

Neil's scores fall into the personality variable of neuroticism and extroversion.

Extroversion is characterized by sociability, activity, outgoing and impulsive behaviour.

Neuroticism is characterized by a person who is moody, touchy, anxious, restless and rigid.

Children's Personality Questionnaire

<u>Factor</u>	<u>Raw Score</u>	<u>Centile Rank</u>
A	2	2
B	10	99
C	4	18
D	7	83
E	5	35
F	4	16
G	7	50
H	2	4
I	5	82
J	6	89
N	1	9
O	7	88
Q3	8	82
Q4	7	86

2nd Order Factors

Anxiety	6.14
Extroversion	2.7

His anxiety scale on this test was 6.14, which is high. The factors which clearly emerge on this profile are the low scores on factors A, H and N. This gives a picture of a reserved, critical child, diffident and timid. Being sensitive and more easily intimidated, he seeks to avoid social threat and over-stimulation through withdrawal. The low score on factor N seems to show that the child is not socially perceptive or skillful. This relates to the low lie score on the JEPI; he appears lacking in defensiveness.

The high scores on factors D, O, Q3 and Q4 relate to his emotional state. This gives the picture of an excitable child, troubled and insecure, tense but who has control of his emotions and is especially socially aware and careful.

The high score on factor B shows a tendency to be 'bright' and

abstract thinking.

Factors E, F and G show an obedient, serious child who has incorporated the values of the adult world to quite a large extent.

Factors I and J, which relate to social situations, reveal a child who is fearful of physical threat, guarded and critical of others.

REPORT FROM SCHOOL

Behaviour: Lively but obedient, eager to please, keen to learn. Speech slightly indistinct.

Work:	Content subject	Good
	Arithmetic	Good
	English reading and spelling	Weak

ASSESSMENT

Neil's problem is poor school performance. His scores on the reading test show a disability in reading which is not explicable in terms of a low level of intelligence. The fact that his brothers and mother have had similar problems appears to show that there might be an inherited factor. Hearing and vision have been checked and cannot be implicated.

The results of the CPQ and the JEPI indicate an emotional disturbance. Neil has a high score on factor O of the CPQ. This is said to be the factor which best differentiates neurotics from the general population. In addition, the Rogers Test of Personality Adjustment shows a great deal of maladjustment. He shows personal inferiority, social inferiority and also maladjustment related to the family.

It would seem, therefore, that Neil's solution to conflicts between inner demands and pressures from the environment have been unsatisfactory. The resultant anxiety has been handled in such

a way as to make necessary the restricted expenditure of energy normally available for specific learning situations. This child's subjective and personal evaluation of himself has a dominant influence on his success in school.